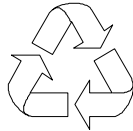# AcerPower Sx/Sxb/Sc
Service Guide

Service guide files and updates are available on the AIPG/CSD web; for more information, please refer to http://csd.acer.com.tw

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Revision History

Please refer to the table below for the updates made on AcerPower SX service guide.

Date	Chapter	Updates
01/11/2001	Chapter 5	Add CN4, SW1 and JP11
01/20/2001	Chapter 1&6	Indicate the the Part nos. of mainboard that supports LAN function.
02/09/2001	Appendix B	Add a NOTE below the table of SCO UNIX/Linux Environment Test section.
03/23/2001	Chapter 4	Add troubleshooting information.
05/29/2001	Cover	Add AcerPower Sxb on the top cover.
	Chapter 2	"Product Information" and "Onboard Perpherals" BIOS screen were added for AcerPower Sxb model.
	Chapter 5	Add a NOTE indicating the part number used by AcerPower Sx and AcerPower Sxb mainboard.
07/16/2001	Chapter 5	Add a note under the table for Socket 370 core/bus clock ratio.
10/26/2001	Chapter 1, Chapter 5, AppA, Cover	For AcerPower Sc: Add system features, Mainboard Jumpers and Connectors Model Definition

Copyright

Disclaimer

Conventions

The following conventions are used in this manual:

`Screen messages`	Denotes actual messages that appear on screen.
NOTE	Gives bits and pieces of additional information related to the current topic.
WARNING	Alerts you to any damage that might result from doing or not doing specific actions.
CAUTION	Gives precautionary measures to avoid possible hardware or software problems.
IMPORTANT	Reminds you to do specific actions relevant to the accomplishment of procedures.

Preface

Before using this information and the product it supports, please read the following general information.

1. This Service Guide provides you with all technical information relating to the BASIC CONFIGURATION decided for Acer's "global" product offering. To better fit local market requirements and enhance product competitiveness, your regional office MAY have decided to extend the functionality of a machine (e.g. add-on card, modem, or extra memory capability). These LOCALIZED FEATURES will NOT be covered in this generic service guide. In such cases, please contact your regional offices or the responsible personnel/channel to provide you with further technical details.

2. Please note WHEN ORDERING FRU PARTS, that you should check the most up-to-date information available on your regional web or channel. If, for whatever reason, a part number change is made, it will not be noted in the printed Service Guide. For ACER-AUTHORIZED SERVICE PROVIDERS, your Acer office may have a DIFFERENT part number code to those given in the FRU list of this printed Service Guide. You MUST use the list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

Table of Contents

Table of Contents

System Specifications

Overview

The AcerPower Sx is an Intel Pentium III or Cyrix III processor with socket-370 based micro-ATX, IBM PC/AT compatible system with LPC/PCI bus.

AcerPower Sx Features

Performance

❑ Intel Pentium® III, Celeron or Cyrix III processor with integrated L2 cache memory running at 500, 550 and 600 MHz or 533, 667, 733 MHz.

❑ Two Dual in-line memory module (DIMM) sockets that accept 32, 64, 128 and 256MB, 168-pin DIMM modules, allowing memory upgrade of up to 512 MB

❑ Power management function (Support for APM-1.2 for Non-ACPI Implementations, ACPI 1.0 compliant)

❑ Plug-and Play (PnP) feature

❑ On-board PCI master enhanced local bus IDE

❑ Models with Part No. 55.39J01.M03 can support 10/100M LAN (Embedded in SiS630 chipset), while some models with Part No. 55.39J01.M06 will not support LAN even though chipsets are still present on the mainboard.

❑ PS/2 mouse and keyboard interface

❑ Low Pin Count (LPC) I/F

❑ 3 PCI slots + 2 DIMM slots

❑ Software shutdown for Windows 95/98

❑ Hardware Monitor function (only support SMB bus)

❑ On-board FDD interface-360K/720K/1.2MB/1.44MB/2.88MB & 3 mode FDD

Multimedia

❑ On-board Audio with AC'97/98 compliant (Embedded in SiS630 chipset)

❑ Line-in, Line-out, Mic-in, and Game/MIDI interfaces

Connectivity

❑ On-board serial ports-2 high speed NS16C550 compatible UARTs with 16 byte FIFOs

❑ On-board parallel port-SPP, EPP and ECP (IEEE 1284 compliant)

❑ Universal Serial Bus (USB) ports

❑ External VGA port for simultaneous LCD and PRT display support

❑ High-speed fax/data PCI modem

Human-centric design and ergonomics

❑ Slim, smooth and stylish design

AcerPower Sc Features

Performance

- ❏ Intel Tualatin Pentium® III, Celeron Pocessor with integrated L2 cache memory running from 1.1GHz to 1.4 GHz.
- ❏ Dual in-line memory module (DIMM) sockets that accept 128MB, 256MB, and 512MB.
- ❏ 168-pin DIMM modules, allowing memory upgrade of up to 1GB
- ❏ Power management function (Support for ACPI compliant)
- ❏ Plug-and Play (PnP) feature
- ❏ On-board PCI master enhanced local bus IDE
- ❏ Built-in SiS900 10/100BASE-T Ethernet controller (RJ-45 connector)
- ❏ USB mouse and keyboard interface
- ❏ Low Pin Count (LPC) I/F
- ❏ 3 PCI slots + 2 DIMM slots
- ❏ Software shutdown for Windows 98se/ME/2K/XP
- ❏ On-board FDD interface-360K/720K/1.2MB/1.44MB/2.88MB & 3 mode FDD

Multimedia

- ❏ On-board Audio with AC'97 CODEC with 16-pin CD-quality stereo output (On Die Controller SiS 630ET chipset).
- ❏ Stereo Input and output , mono microphone input interfaces

Connectivity

- ❏ On-board serial port- One high speed NS16C550 compatible UARTs with 16 byte FIFOs
- ❏ On-board parallel port- EPP, ECP, and IEEE 1284
- ❏ Mini-DIN PS/2 keyboard and mouse ports
- ❏ 4 Universal Serial Bus (USB) ports
- ❏ High-speed fax/data PCI modem

Human-centric design and ergonomics

- ❏ Slim, smooth and stylish design

Front Panel

The computer's front panel consists of the following:
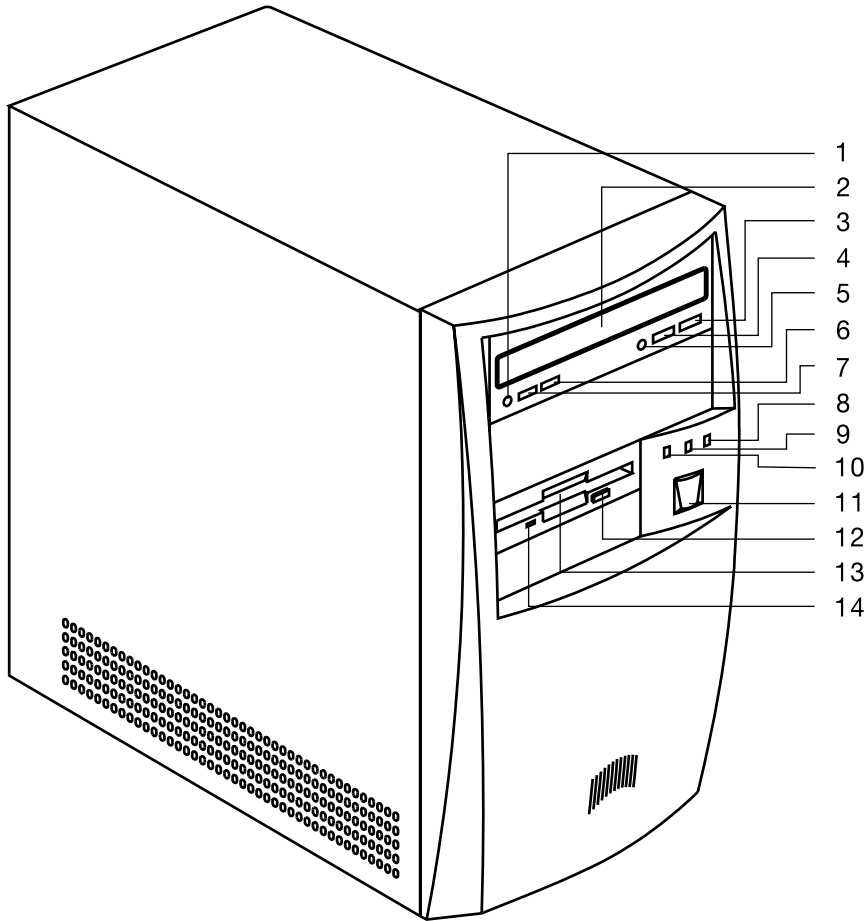
Label	Description
1	Headphone/Earphone port
2	CD-ROM tray
3	Stop/Eject button
4	Skip/Forward button
5	CD-ROM LED
6	Increase volume button
7	Decrease volume button
8	Turbo LED
9	Power LED
10	Hard disk drive LED
11	Power button
12	3.5-inch floppy disk drive eject button
13	3.5-inch floppy disk drive
14	3.5-inch floppy disk drive LED

Rear Panel

The computer's rear panel consists of the following:
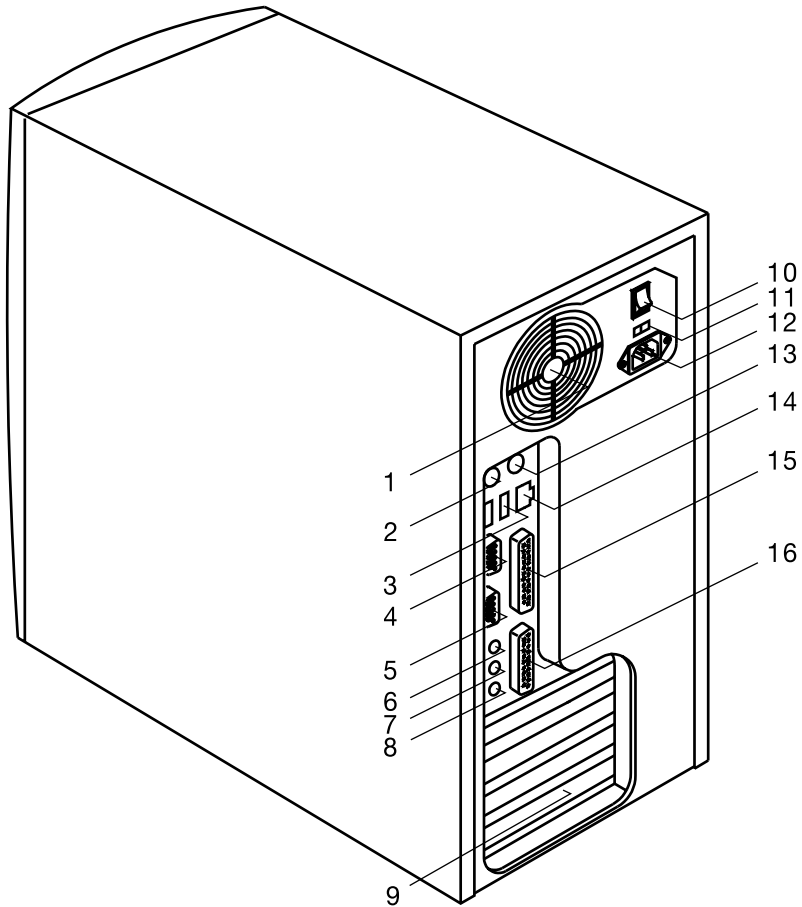
Label	Description
1	Fan
2	PS/2 keyboard port
3	USB ports
4	Serial port
5	VGA/Monitor port
6	Speaker-out/Line-out port
7	Line-in port
8	Microphone-in port
9	Add-on brackets
10	System main power switch
11	Voltage selector
12	System power socket
13	PS/2 mouse port
14	LAN port
15	Parallel port
16	Game/MIDI port

AcerPower Sx Main Board Layout
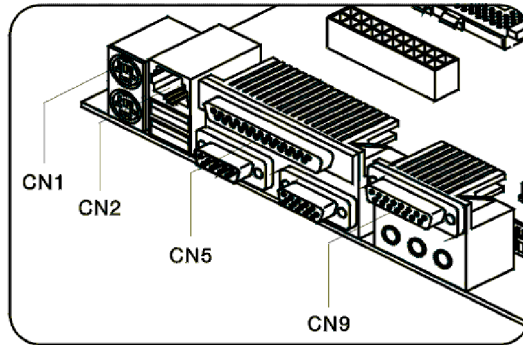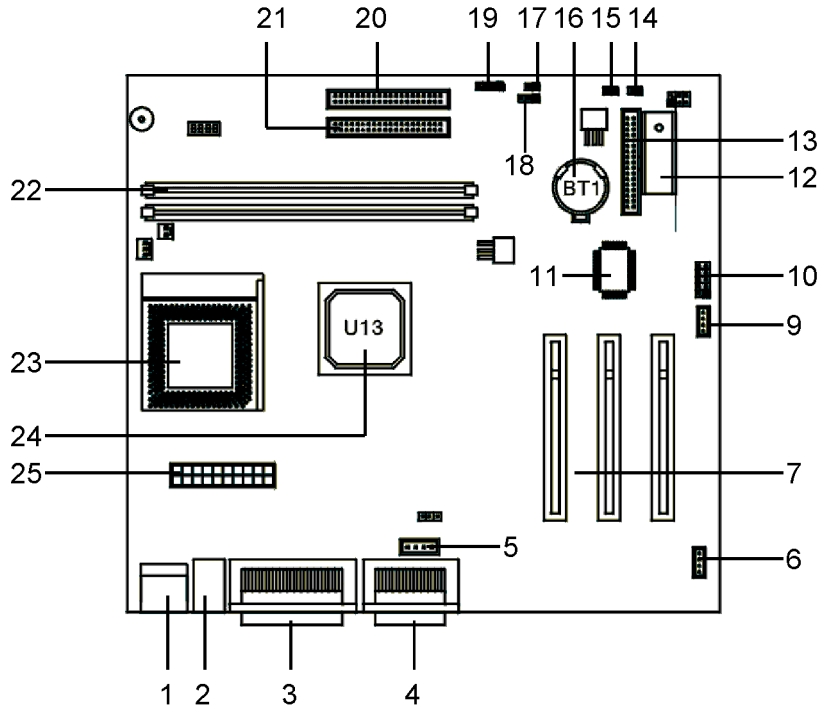
1. PS/2 keyboard and mouse port	14. Reset
2. USB/LAN port	15. Power Switch
3. Parallel/VGA/serial port 2	16. Battery
4. Game/MIDI port	17. LAN/LED
5. Audio/CD connector	18. Power LED
6. Fax/voice modem connector	19. Hard Disk Drive LED connector
7. PCI slots (three slots)	20. IDE 1 connector
9. Wake on LAN connector	21. IDE 2 connector
10. Serial port 1	22. DIMM sockets (two sockets)
11. SiS950 chipset	23. CPU socket
12. BIOS chipset	24. SiS630 chipset
13. Floppy disk drive connector	25. ATX power connector

NOTE: 8 was for AGP slot, removed when ship out

AcerPower Sc Main Board Layout
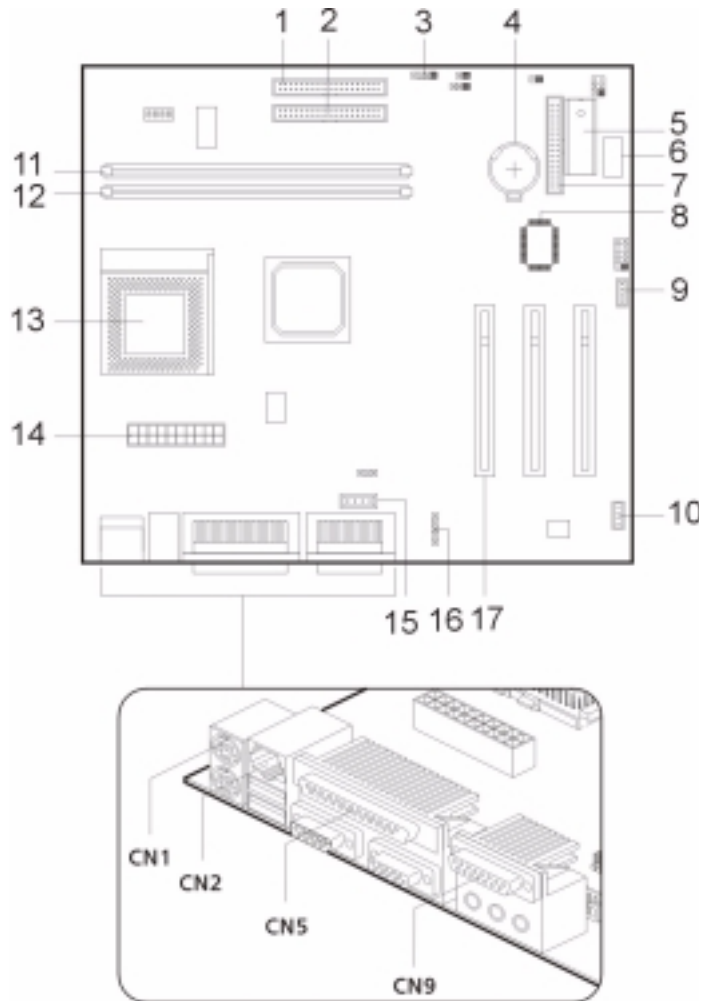
1. IDE 1 connector
2. IDE 2 connector
3. Hard Disk Drive LED connector
4. RTC Battery
5. ROM
6. Optional USB ports
7. Floppy disk drive connector
8. SiS950 chipset
9. Wake on LAN connector
10. Fax voice modem connector
11. DIMM sockets
12. CPU socket
13. ATX power connector
14. Audio/CD connector
15. Audio-in connector
16. PCI sockets (three slots)
17. PS/2 keyboard and mouse port

Keyboard

The keyboard has full-sized keys that include separate cursor keys, two Windows keys, and twelve function keys.
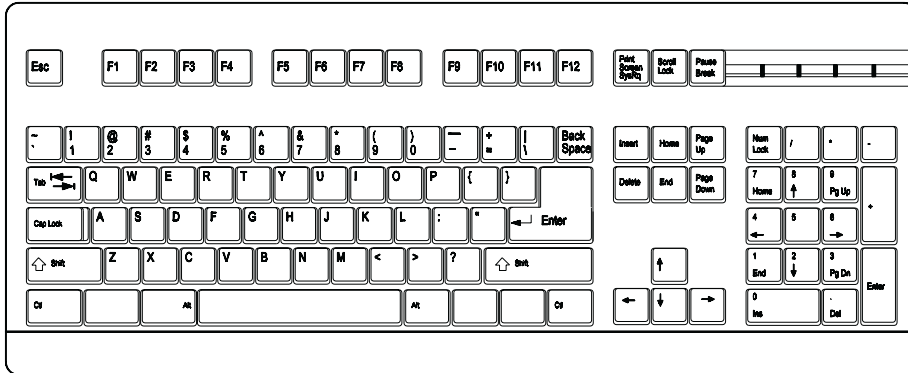
Cursor keys

The cursor keys, also called the arrow keys, let you move the cursor around the screen. They serve the same function as the arrow keys on the numeric keypad when the Num Lock is toggled off.

Lock keys

The keyboard has three lock keys which you can toggle on and off to switch between two functions.

Lock Key	Description
Caps Lock	When activated, all alphabetic characters typed appear in uppercase (same function as pressing **Shift** + <letter>).
Num Lock	When activated, the keypad is set to numeric mode, i.e., the keys will function as a calculator (complete with arithmetic operators such as +, -, x, and /).
Scroll Lock	When activated, the screen moves one line up or down when you press the up arrow or down arrow respectively. Take note that Scroll Lock may not work with some applications.

Windows keys

The keyboard has two keys that perform Windows-specific functions.

Key	Description
Windows logo key	Start button. Combinations with this key perform special functions, such as:
	❏ **Windows** + **Tab**: Activate the next Taskbar button
	❏ **Windows** + **E**: Explores My Computer
	❏ **Windows** + **F**: Finds a Document
	❏ **Windows** + **M**: Minimizes All
	❏ **Shift** + **Windows** + **M**: Undoes Minimize All
	❏ **Windows** + **R**: Displays the Run dialog box
Application key	Opens the application's context menu (same function as clicking the right button of the mouse).

Hardware Specifications and Configurations

Processor

Item	Specification
Type	AcerPower Sx: Intel Pentium III, Celeron or Cyrix III processor
	AcerPower Sc: Intel Tualatin Pentium III, Celeron processor
Socket	370
Speed	AcerPower Sx: 500/550/600 MHz, 533/667/733 MHz
	AcerPower Sc: Coppermine up to 1.1 GHz
	Tualatin from 1.2 to 1.4 GHz and above
	Celeron 850/950 MHz , 1.1/1.2 GHz
Minimum operating speed	0 MHz (If **Stop CPU Clock in Sleep State in BIOS Setup** is set to **Enabled**.)
Voltage	Processor voltage can be detected by the system without setting any jumper.

BIOS

Item	Specification
BIOS code programmer	Acer
BIOS version	AcerPower Sx :V4.0, R01-A4
	AcerPower Sc : R07-B3
BIOS ROM type	Bulk mode flash ROM
BIOS ROM size	AcerPower Sx: 256Kbyte
	AcerPower Sc: 4MB
BIOS ROM package	32-pin DIP package
Support protocol	PCI 2.2, APM1.2, DMI 2.00.1, E-IDE, ACPI 1.0, ESCD 1.03, ANSI ATA 3.0, PnP 1a, Bootable CD-ROM 1.0, ATAPI
Boot from CD-ROM feature	Yes
Support to LS-120 drive	No
Support to BIOS boot block feature	No

NOTE: The BIOS can be overwritten/upgraded using the AFLASH utility (AFLASH.EXE).

BIOS Hotkey List

Hotkey	Function	Description
CTRL + ALT + ESC	Enter BIOS Setup Utility	Press while the system is booting to enter BIOS Setup Utility.
F8	Enable hidden page of BIOS Setup Utility	Press in BIOS Setup Utility main menu screen, the Advanced Options menu then appears. The items on the Advanced Options menu are: Memory/Cache Options PnP/PCI Options

BIOS Hotkey List

Hotkey	Function	Description
Alt+F4	Enable hidden page of BIOS Setup Utility	Press in BIOS Setup Utility main menu screen, the Advanced Options menu then appears. The items on the Advanced Options menu are: Memory/Cache Options PnP/PCI Options Chips Options

This section has two table lists, system memory specification and the possible combinations of memory module.

System Memory

Item	Specification
Memory socket number	2 sockets (2 banks)
Support memory size per socket	AcerPower Sx: 32MB / 64MB / 128MB / 256MB AcerPower Sc: 128MB / 256MB/512MB
Support maximum memory size	AcerPower Sx: 512MB (256MB x 2) AcerPower Sc: 1GB (512MB x 2)
Support memory type	SDRAM
Support memory speed	133MHz (PC133) (for Local Bus speed 133MHz, 100MHz
Support memory voltage	3.3 V
Support memory module package	168-pin DIMM
Support to parity check feature	Yes
Support to Error Correction Code (ECC) feature	Yes
Memory module combinations	You can install memory modules in any combination as long as they match the above specifications.

Memory Combinations

DIMM 1	DIMM 2	Total
32M	None	32M
64M	None	64M
128M	None	128M
256M	None	256M
512M	None	512M
None	32M	32M
None	64M	64M
None	128M	128M
None	256M	256M
None	512M	512M
32M	32M	64M
32M	64M	96M
32M	128M	160M
32M	256M	288M
64M	32M	96M
64M	64M	128M
64M	128M	192M
64M	256M	320M
128M	32M	160M
128M	64M	192M
128M	128M	256M
128M	256M	384M
256M	32M	288M
256M	64M	320M
256M	128M	384M
256M	256M	512M

Cache Memory

Item	Specification
First-Level Cache Configurations	
Cache function control	Enable/Disable by BIOS Setup
Second-Level Cache Configurations Below information is only applicable to system with installed Pentium III processor.	
L2 Cache RAM type	PBSRAM
L2 Cache RAM size	256-KB
L2 Cache RAM speed	One-half the processor core clock frequency
L2 Cache RAM voltage	Pentium III processor: 1.65V
L2 Cache function control	Enable/Disable by BIOS Setup
L2 Cache scheme	Fixed in write-back

Video Memory

Item	Specification
Memory size	8 MB or above
Memory type	SDRAM (Synchronous Dynamic RAM)
Memory configuration	1M*16 * 2
Fixed on-board or upgradeable	Fixed on-board by BIOS setting
Memory speed	66/100/133 MHz
Memory voltage	3.3V
Memory package	54 pin FPGA

This section has two table lists, the video interface specification and its supported display modes.

Video Interface

Item	Specification
Video controller	SiS630
Video controller resident bus	AGP bus
Video interface support	Video YUV texture in all texture formats H/W DVD accelerator

Display Screen Resolution	Refresh Rate (Hz)	Hor. Scan (KHz)	Pixel Clock (MHz)
640x480	60	31.5	25.2
640x480	72	37.4	32.0
640x480	75	37.5	31.5
640x480	85	43.3	36.0
640x480	120	63.7	55.0
800x600	56	35.2	36.0
800x600	60	37.8	39.9
800x600	72	48.0	50.0
800x600	75	46.9	49.5
800x600	85	53.7	56.2
800x600	100	62.5	67.5

Display Screen Resolution	Refresh Rate (Hz)	Hor. Scan (KHz)	Pixel Clock (MHz)
800x600	120	76.1	81.0
800x600	160	101.9	110.0
1024x768	70	56.5	75.0
1024x768	75	60.0	78.8
1024x768	100	79.0	110.0
1280x1024	43	50.0	80.0
1280x1024	60	64.0	110.0
1280x1024	85	91.2	157.5
1600x1200	60	76.2	156.0
1600x1200	85	106.2	229.5

Audio Interface

Item	Specification
Audio controller	AcerPower Sx : SiS630 AcerPower Sc : SiS630ET(Main), Crystal 4299 (CODEC)
Audio controller resident bus	AC'97/98
Audio function control	Enable/disable by BIOS Setup
Mono or stereo	Stereo
Resolution	20 bits
Compatibility	Sound Blaster Pro/16 compatible Mixed digital and analog high performance chip Enhanced stereo full duplex operation High performance audio accelerator and AC'97/98 support Full native DOS games compatibility Virtual FM enhances audio experience through real-time FM-to-Wavetable conversion MPU-401(UART mode) interface for wavetable synthesizers and MIDI devices Integrated dual game port Meets AC'97/98 and WHQL specifications
Music synthesizer	Yes, internal FM synthesizer
Sampling rate	48 KHz (max.)
MPU-401 UART support	Yes
Microphone jack	Supported
Headphone jack	Supported

IDE Interface

Item	Specification
IDE controller	AcerPower Sx :SiS630 AcerPower Sc :SiS630ET, Ultra ATA100
IDE controller resident bus	PCI bus
Number of IDE channel	2
Support IDE interface	E-IDE (up to PIO mode-4 and Ultra DMA 33/66), ANSIS ATA rev.3.0 ATAPI
Support bootable CD-ROM	Yes

Floppy disk drive Interface

Item	Specification
Floppy disk drive controller	SiS950
Floppy disk drive controller resident bus	ISA bus
Support FDD format	360KB, 720KB, 1.2MB, 1.44MB, 2.88MB

Parallel Port

Item	Specification
Parallel port controller	SiS950
Parallel port controller resident bus	ISA bus
Number of parallel ports	1
Support ECP/EPP	SPP / Bi-directional / ECP / EPP
Connector type	25-pin D-type female connector
Parallel port function control	Enable/disable by BIOS Setup
Optional ECP DMA channel (in BIOS Setup)	DMA channel 1 DMA channel 3
Optional parallel port I/O address (via BIOS Setup)	378h 278h
Optional parallel port IRQ (via BIOS Setup)	IRQ5 IRQ7

Serial Port

Item	Specification
Serial port controller	SiS950
Serial port controller resident bus	ISA bus
Number of serial port	2
Serial ports location	CN4, 5
16550 UART support	Yes
Connector type	9-pin D-type female connector
Optional serial port I/O address (via BIOS Setup)	COM1: 2F8h, 3E8h, 2E8h COM2: 3E8h, 3F8h, 2F8h
Optional serial port IRQ (via BIOS Setup)	COM1: IRQ 3, and 4 COM2: IRQ 4, and 3

Modem

Item	Specification
Fax modem data baud rate (bps)	V.17 12K/1.44K
Data modem data baud rate (bps)	V.90 32K to 56K (received only)
Voice modem	V.253
Modem connector type	RJ11
Full duplex	Yes

NOTE: AcerPower Sc support V.90 56K with Universal DAA Fax/Modem.

USB Port

Item	Specification
Universal HCI	USB 1.1
USB Class	Support legacy keyboard for legacy mode

Memory Address Map

Address	Size	Function
000000 - 07FFFF	512KBytes	Host Memory
080000 - 09FFFF	128KBytes	Host/PCI Memory
0A0000 - 0BFFFF	128KBytes	PCI/ISA Video Buffer Memory
0C0000 - 0C7FFF	32KBytes	Video BIOS Memory
0C8000 - 0DFFFF	96Kbytes	ISA Card BIOS & Buffer Memory
0E0000 - 0EFFFF	64Kbytes	BIOS Extension Memory Setup and Post Memory PCI Development BIOS
0F0000 - 0FFFFF	64Kbytes	System BIOS Memory
100000 - UPPER LIMIT		Main Memory
UPPER LIMIT - 4GBytes		PCI Memory

PCI INTx# and IDSEL Assignment Map

PCI INTx #	PCI Devices	Device IDSEL: ADxx
INTA#	ADIMM-slot	N
INTB#	PCI-Slot1	AD20
INTC#	PCI-Slot2	AD22
INTD#	PCI-Slot3	AD24

PCI Slot IRQ Routing Map

PCI INTX#	INTA	INTB	INTC	INTD	Bus Mastering
PCI slot 1	Route 4	Route 1	Route 2	Route 3	Enabled
PCI slot 2	Route 3	Route 4	Route 1	Route 2	Enabled
PCI slot 3	Route 2	Route 3	Route 4	Route 1	Enabled

I/O Address Map

Hex Range	Devices
000-01F	DMA Controller-1
020-021	Interrupt Controller-1
040-043	System Timer
060-060	Keyboard Controller 8742
061-061	System Speaker
070-071	CMOS RAM Address and Real Time Clock
080-08F	DMA Page Register
0A0-0A1	Interrupt Controller-2
0C0-0DF	DMA Controller-2
0F0-0FF	Math Co-Processor
170-177	Secondary IDE
1F0-1F7	Primary IDE
278-27F	Parallel Printer Port 2
2F8-2FF	Serial Asynchronous Port 2
378-37F	Parallel Printer Port 1
3F0-3F5	Floppy Disk Controller
3F6-3F6	Secondary IDE
3F7-3F7	Primary IDE
3F8-3FF	Serial Asynchronous Port 1
0CF8	Configuration Address Register
0CFC	Configuration Data Register
778-77A	Parallel Printer Port 1

IRQ Assignment Map

IRQx	System Devices	Add-On-Card Devices
IRQ0	Timer	N
IRQ1	Keyboard	N
IRQ2	Cascade Interrupt Control	N
IRQ3	Serial Alternate	Reserved
IRQ4	Serial Primary	Reserved
IRQ5	MPU-401(Alternate)	Reserved
IRQ6	Floppy Disk	Reserved
IRQ7	Parallel Port	Reserved
IRQ8	Real Time Clock	N
IRQ9	N	Reserved
IRQ10	N	Reserved
IRQ11	N	Reserved
IRQ12	PS/2 Mouse	Reserved
IRQ13	Math Coprocessor Exception	N
IRQ14	Primary IDE	Reserved
IRQ15	Secondary IDE	Reserved

NOTE: N - Not be used

DRQ Assignment Map

DRQx	System Devices	Add-On-Card Devices
DRQ0	N	Reserved
DRQ1	N	Reserved
DRQ2	FDD	N
DRQ3	N	Reserved
DRQ4	Cascade	N
DRQ5	N	Reserved
DRQ6	N	Reserved
DRQ7	N	Reserved

NOTE: N - Not be used

Main Board Major Chips

Item	Controller
System core logic	SiS630 / SiS950
Video controller	SiS630
Super I/O controller	SiS950
Audio controller	SiS630
LAN controller	SiS630
HDD controller	Built in SiS630
Keyboard controller	Built in SiS630
RTC	Built in SiS630

Environmental Requirements

Item	Specifications
Temperature	
Operating	+10 ~ +35°C
Non-operating	-20 ~ +60°C (Storage package)
Humidity	
Operating	20% to 80% RH
Non-operating	20% to 80% RH
Vibration	
Operating (unpacked)	5 ~ 16 Hz: 0.015 mm 16 ~ 250 Hz: 0.21 G
Non-operating (packed)	5 ~ 27.1 Hz: 0.6 G 27.1 ~ 50 Hz: 0.016 mm 50 ~ 500 Hz: 2 G

Mechanical Specifications

Item	Specification
Weight One 3 ½ FDD and one 3.5 HDD (without packing)	Varied by local configuration
Dimensions (main footprint)	190mm * 320mm * 360mm

Switching Power Supply 102W

Input Frequency	Frequency Variation Range
50MHz	47MHz to 53MHz
60MHz	57MHz to 63MHz

Input Voltage	Variation Range
100 - 120 VRMS	90 - 132 VRMS
200 - 240 VRMS	180 - 264 VRMS

Input Current	Measuring Range
4A	90 -132 VRMS
2A	180 - 264 VRMS

NOTE: Measure at line input 90 VRMS and maximum load condition.

Output Requirements	Regulation	Current Rating
+5V	+-5%	15A
+12V	+-5%	3A
-12V	+-10%	0.3A
+3.3V	+-4%	12A
+5Vaux	+-5%	3A

NOTE: AcerPower Sc is using 145W power supply.

Power Management Function (ACPI support function)

Device Standby Mode

❏ Independent power management timer for hard disk drive devices
(0-15 minutes, time step=1 minute).

❏ Hard disk drive goes into Standby mode (for ATA standard interface).

❏ Disable V-sync to control the VESA DPMS monitor.

❏ Resume method: device activated (Keyboard for DOS, keyboard & mouse for Windows).

❏ Resume recovery time: 3-5 sec.

Global Standby Mode

❏ Global power management timer (2-120 minutes, time step=10 minute).

❏ Hard disk drive goes into Standby mode (for ATA standard interface).

❏ Disable H-sync and V-sync signals to control the VESA DPMS monitor.

❏ Resume method: Return to original state by pushing external switch button, modem ring in,
keyboard and mouse for APM mode.

❏ Resume recovery time: 7-10 sec.

NOTE: AcerPower Sc : Resume method: Return to original state by pushing external switch button, keyboard
and mouse for ACPI mode

Suspend Mode

❏ Independent power management timer (2-120 minutes, time step=10 minutes) or pushing external
switch button.

❏ CPU goes into SMM.

❏ CPU asserts STPCLK# and goes into the Stop Grant State.

❏ LED on the panel turns amber colour.

❏ Hard disk drive goes into SLEEP mode (for ATA standard interface).

❏ Disable H-sync and V-sync signals to control the VESA DPMS monitor.

❏ Ultra I/O and VGA chip go into power saving mode.

❏ Resume method: Return to original state by pushing external switch button, modem ring in,
keyboard and mouse for APM mode.

❏ Return to original state by pushing external switch button, modem ring in and USB keyboard for
ACPI mode.

NOTE: AcerPower Sc : Resume method: Return to original state by pushing external switch button, keyboard
and mouse for ACPI mode

ACPI

❏ ACPI specification 1.0.

❏ S0, S1, S3 and S5 sleep state support.

❏ On board device power management support.

❏ On board device configuration support.

NOTE: AcerPower Sc : ACPI specification 1.0b.

System Utilities

Most systems are already configured by the manufacturer or the dealer. There is no need to run Setup when starting the computer unless you get a Run Setup message.

The Setup program loads configuration values into the battery-backed nonvolatile memory called CMOS RAM. This memory area is not part of the system RAM.

NOTE: If you repeatedly receive Run Setup messages, the battery may be bad. In this case, the system cannot retain configuration values in CMOS.

Before you run Setup, make sure that you have saved all open files. The system reboots immediately after you exit Setup.

Entering Setup

To enter Setup, press the key combination ⌞CTRL⌟ ⌞ALT⌟ ⌞ESC⌟.

NOTE: You must press ⌞CTRL⌟ ⌞ALT⌟ ⌞ESC⌟ simultaneously while the system is booting.

The Setup Utility main menu then appears:

```
┌──────────────────────────────────────┐
│            Setup Utility              │
├──────────────────────────────────────┤
│   • System Information                │
│   • Product Information               │
│   • Disk Drives                       │
│   • Onboard Peripherals               │
│   • Power Management                  │
│   • Boot Options                      │
│   • Date and Time                     │
│   • System Security                   │
│                                       │
│                                       │
│     Load Default Settings             │
│     Abort Settings Change             │
│                                       │
└──────────────────────────────────────┘
```
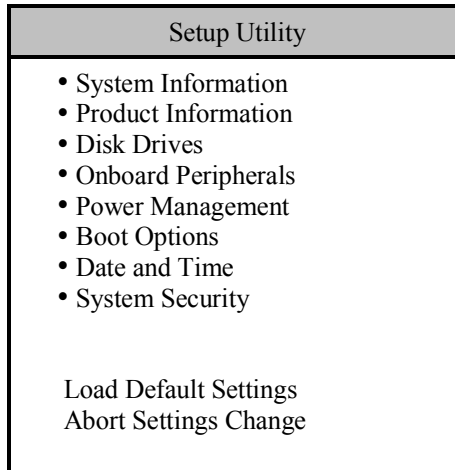
The system supports two BIOS Utility levels: Basic and Advanced. The above screen is the BIOS Utility Basic Level screen. It allows you to view and change only the basic configuration of your system.

If you are an advanced user, you may want to check the detailed configuration of your system. Detailed system configurations are contained in the Advanced Level. To view the Advanced Level menu, press **F8** or the **Alt + F4** keys simultaneously.

NOTE: The **F8** and **Alt + F4** keys work only when you are in the main menu. This means that you can activate the advanced level and hidden information only when you are in the main menu.

The following screen shows the Advanced Level main menu:

```
┌──────────────────────────────────────┐
│            Setup Utility              │
├──────────────────────────────────────┤
│   • System Information                │
│   • Product Information               │
│   • Disk Drives                       │
│   • Onboard Peripherals               │
│   • Power Management                  │
│   • Boot Options                      │
│   • Date and Time                     │
│   • System Security                   │
│   • *Advanced Options                 │
│                                       │
│     Load Default Settings             │
│     Abort Settings Change             │
│                                       │
└──────────────────────────────────────┘
```
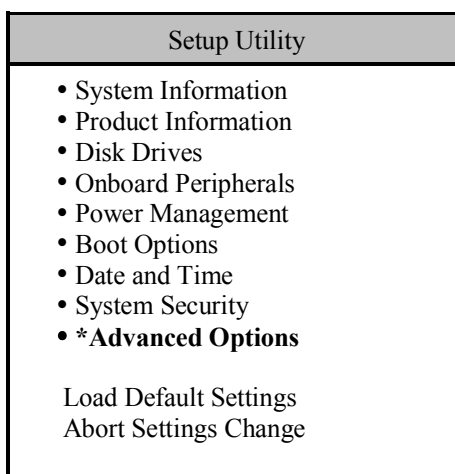
The command line at the bottom of the menu tells you how to move within a screen and from one screen to another.

❑ To select an option, move the highlight bar by pressing ⬆ or ⬇ then press ENTER.

❑ Press PGDN to move to the next page or PGUP to return to the previous page.

❑ To change a parameter setting, press ⬅ or ➡ until the desired setting is found.

❑ Press ESC to return to the main menu. If you are already in the main menu, press ESC again to exit Setup.

The parameters on the screens show default values. These values may not be the same as those in your system.

The grayed items on the screens have fixed settings and are not user-configurable.

System Information

The following screen appears if you select System Information from the main menu.

```
┌──────────────────────────────────────────────────────────────────────┐
│                          System Information                            │
├──────────────────────────────────────────────────────────────────────┤
│                                                                        │
│     Processor ...............................................Pentium III │
│     Processor Speed ...................................500E MHz          │
│     Level 1 Cache .......................................32 KB, Enabled  │
│     Level 2 Cache.......................................256 KB, Enabled  │
│     Diskette Drive A ...................................1.44 MB 3.5-inch │
│     Diskette Drive B ...................................None             │
│     IDE Primary Channel Master  ...............Hard Disk, 4311 M.B.      │
│     IDE Primary Channel Slave  ...................None                   │
│     IDE Secondary Channel Master  ............None                      │
│     IDE Secondary Channel Slave  ..............IDE CD-ROM                │
│     Total Memory.......................................56 MB + 8192 KB Share Memory │
│      1st Bank ...........................................SDRAM, 32 MB     │
│      2nd Bank  .........................................SDRAM, 32 MB      │
│                                                                        │
│     Serial Port 1.........................................Disabled       │
│     Serial Port 2.........................................3F8h, IRQ 4     │
│     Parallel Port .......................................378h, IRQ 7     │
│     PS/2 Mouse .......................................Installed          │
│                                                                        │
└──────────────────────────────────────────────────────────────────────┘
```

This page shows the current basic configuration of your system.

The following table describes the parameters found in the System Information pages:

Parameter	Description	Format
Processor	Specifies the type of processor currently installed in your system.	
Processor Speed	Specifies the speed of the processor currently installed in your system.	Speed in MHz
Level 1 Cache	Specifies the first-level or the internal memory (i.e., the memory integrated into the processor) size, and whether it is enabled or disabled.	Cache size in KB
Level 2 Cache	Specifies the second-level cache memory size currently supported by the system.	Cache size in KB
Diskette Drive A	Shows the diskette drive A type.	Capacity, dimension
Diskette Drive B	Shows the diskette drive B type.	Capacity, dimension
IDE Primary Channel Master	Specifies the current configuration of the IDE device connected to the master port of the primary IDE channel.	Drive type, capacity
IDE Primary Channel Slave	Specifies the current configuration of the IDE device connected to the slave port of the primary IDE channel.	Drive type, capacity
IDE Secondary Channel Master	Specifies the current configuration of the IDE device connected to the master port of the secondary IDE channel.	Drive type, capacity
IDE Secondary Channel Slave	Specifies the current configuration of the IDE device connected to the slave port of the secondary IDE channel.	Drive type, capacity

Parameter	Description	Format
Total Memory	Specifies the total amount of onboard memory. The memory size is automatically detected by BIOS during the POST. If you install additional memory, the system automatically adjusts this parameter to display the new memory size.	Memory size in MB
1st Bank	Indicates the type of DRAM installed in the DIMM 1 socket. The None setting indicates that there is no DRAM installed.	DIMM type, capacity in MB
2nd Bank	Indicates the type of DRAM installed in the DIMM 2 socket. The None setting indicates that there is no DRAM installed.	DIMM type, capacity in MB
Serial Port 1	Shows the serial port 1 address and IRQ settings.	Address, IRQ
Serial Port 2	Shows the serial port 2 address and IRQ settings.	Address, IRQ
Parallel Port	Shows the parallel port address and IRQ settings.	Address, IRQ
PS/2 Mouse	Indicates if there is a mouse connected to your system. This is automatically detected by BIOS.	Displays Installed if there is a mouse detected; otherwise, it displays None.

Product Information

The screen below appears if you select Product Information from the main menu:

```
                           Product Information

     Product Name  ........................................AcerPower Sx
     System S/N  ...........................................N/A
     Main Board ID .......................................S57M
     Main Board S/N ....................................N/A
     System BIOS Version ...........................V4.0
     SMBIOS Version ...................................2.3
     System BIOS ID....................................R01-A4 EN-JA
     BIOS Release Date ................................Jan 06, '00
```

```
                           Product Information

     Product Name  .........................AcerPower Sxb
     System S/N............................N/A
     Main Board ID.........................S57M
     Main Board S/N........................N/A
     System BIOS Version...................V4.0
     SMBIOS Version........................2.3
     *System BIOS ID.......................R06-A1
     BIOS Release Date.....................April 16,01
```

NOTE: This screen can be seen on Acer Power Sxb model.

The Product Information menu contains general data about the system, such as the product name, serial number, BIOS version, etc. These information is necessary for troubleshooting (maybe required when asking for technical support).
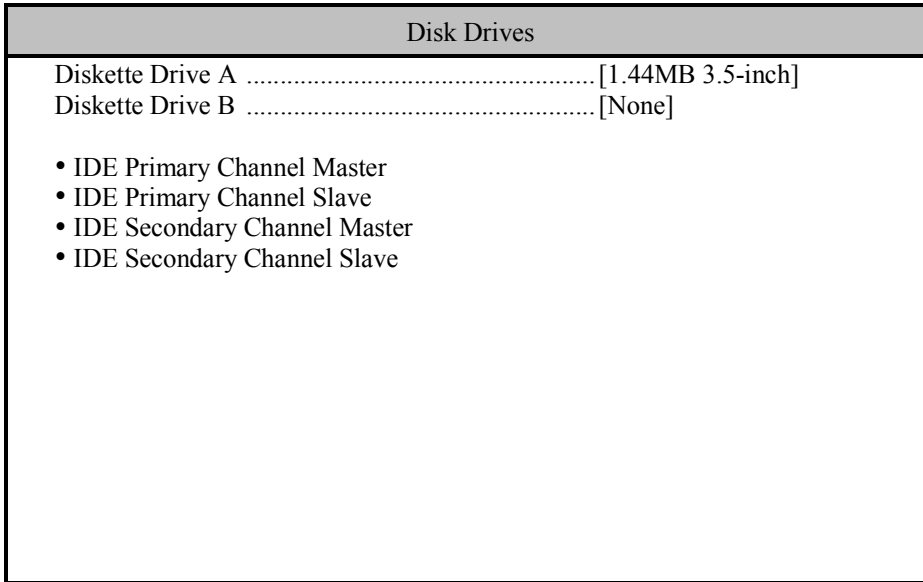
The following table describes the parameters found in this menu:

Parameter	Description
Product Name	Displays the model name of your system.
System S/N	Displays your system's serial number.
Main Board ID	Displays the main board's identification number.
Main Board S/N	Displays your main board's serial number.
System BIOS Version	Specifies the version of your BIOS utility.
SMBIOS version	The System Management Interface (SM) BIOS allows you to check your system hardware components without actually opening your system. Hardware checking is done via software during start up. This parameter specifies the version of the SMBIOS utility installed in your system.
System BIOS ID	Specifies the version ID of the BIOS utility.
BIOS Release Date	Displays the release date of the BIOS utility.

Disk Drives

Select Disk Drives from the main menu to configure the drives installed in your system.

The following screen shows the Disk Drives menu:

```
┌─────────────────────────────────────────────────────────────────┐
│                          Disk Drives                            │
├─────────────────────────────────────────────────────────────────┤
│   Diskette Drive A ...................................[1.44MB 3.5-inch]│
│   Diskette Drive B ...................................[None]       │
│                                                                   │
│   • IDE Primary Channel Master                                    │
│   • IDE Primary Channel Slave                                     │
│   • IDE Secondary Channel Master                                  │
│   • IDE Secondary Channel Slave                                   │
│                                                                   │
│                                                                   │
│                                                                   │
│                                                                   │
│                                                                   │
│                                                                   │
│                                                                   │
└─────────────────────────────────────────────────────────────────┘
```

The following table describes the parameters found in this menu. Settings in **boldface** are the default and suggested settings.

Parameter	Description	Options
Diskette Drive A / B	Allows you to configure your floppy drive	None
		360 KB, 5.25-inch
		1.2 MB, 5.25-inch
		720 KB, 3.5-inch
		1.44 MB, 3.5-inch
		2.88 MB, 3.5-inch
IDE Primary Channel Master	Allows you to configure the hard disk drive connected to the master port of IDE channel 1.	
IDE Primary Channel Slave	Lets you configure the hard disk drive connected to the slave port of IDE channel 1.	
IDE Secondary Channel Master	Allows you to configure the hard disk drive connected to the master port of IDE channel 2.	
IDE Secondary Channel Slave	Lets you configure the hard disk drive connected to the slave port of IDE channel 2.	

IDE Primary/Secondary Channel Master/Slave

The following screen appears if you select any of the IDE drive parameters:

```
┌─────────────────────────────────────────────────────────────┐
│               IDE Primary Channel Master                    │
├─────────────────────────────────────────────────────────────┤
│                                                             │
│   Device Detection Mode ........................[Auto]      │
│    Device Type........................................Hard Disk │
│                                                             │
│    Cylinder ............................................[8354] │
│    Head.................................................[ 16]  │
│    Sector...............................................[ 63]  │
│    Size ................................................[4311] M.B. │
│                                                             │
│    Hard Disk LBA Mode ........................[Auto]        │
│   *Hard Disk Block Mode......................[Auto]         │
│   *Hard Disk 32 Bit Access ..................[Enabled ]     │
│                                                             │
│   *Advanced PIO Mode ........................[Auto]         │
│   *DMA Transfer Mode........................[Auto]          │
│                                                             │
│                                                             │
└─────────────────────────────────────────────────────────────┘
```

NOTE: *These items can only be seen when you are in the Advanced Level.

The following table describes the parameters found in this menu. Settings in **boldface** are the default and suggested settings.

Parameter	Description	Options
Device Detection Mode	Lets you specify the type of hard disk installed in your system. If you want BIOS to automatically configure your hard disk, select Auto. If you know your hard disk type, you can enter the setting manually. Setting this parameter also sets the Cylinder, Head, Sector, and Size parameters.	**Auto,** None, or User. The User setting allows you to enter your settings manually if you know your hard disk type. The Auto setting also sets the Cylinder, Head, Sector, and Size parameters.
Device Type	Display the type of device installed.	Not configurable. The default is **Hard Disk**.
Cylinder	Specifies your hard disk's number of cylinders, and is automatically set depending on your Type parameter setting.	Only Device Detection Mode is set to User, the item Cylinder will be available; Otherwise it is non-configurable.
Head	Specifies your hard disk's number of heads, and is automatically set depending on your Type parameter setting.	Only Device Detection Mode is set to User, the item Head will be available; Otherwise it is non-configurable.
Sector	Specifies your hard disk's number of sectors, and is automatically set depending on your Type parameter setting.	Only Device Detection Mode is set to User, the item Sector will be available; Otherwise it is non-configurable.
Size	Specifies the size of your hard disk, in MB, and is automatically set depending on your Type parameter setting	It will turn to gray and will be non-configurable.
Hard Disk LBA Mode	Set to "Auto" under DOS and Windows. Set to "Disabled" under Novell Netware and Unix.	**Auto** or Disabled

Parameter	Description	Options
Hard Disk Block Mode	This function enhances disk performance depending on the hard disk in use. If you set this parameter to Auto, the BIOS utility automatically detects if the installed hard disk drive supports the Block Mode function. If supported, it allows data transfer in blocks (multiple sectors) at a rate of 256 bytes per cycle.	**Auto** or Disabled
Hard Disk 32-bit Access	Enabling this parameter improves system performance by allowing the use of the 32-bit hard disk access. This enhanced IDE feature works only under DOS, Windows 3.x, Windows 95/98, Windows NT, and Novell NetWare.	**Enabled** or Disabled
Advanced PIO Mode	When set to Auto, the BIOS utility automatically detects if the installed hard disk supports the function, it allows for faster data recovery and read/ write timing that reduces hard disk activity time. This results in better hard disk performance.	**Auto**, Mode 0, 1, 2, 3 or 4
DMA Transfer Mode	The Ultra DMA and Multi-DMA modes enhance hard disk performance by increasing the transfer rate. However, besides enabling these features in the BIOS Setup, both the Ultra DMA and Multi-DMA modes require the DMA driver to be loaded.	**Auto** Multiword Mode 0, 1, 2 Ultra Mode 0, 1, 2, 3, 4 Disabled

Onboard Peripherals

The Onboard Peripherals menu allows you to configure the onboard devices. Selecting this option from the main menu displays the following screen:

```
┌─────────────────────────────────────────────────────────────────────┐
│                        Onboard Peripherals                          │
├─────────────────────────────────────────────────────────────────────┤
│                                                                     │
│     Serial Port 1 ...........................................[Disabled]│
│       Base Address .......................................[----]     │
│       IRQ ................................................[-]        │
│     Serial Port 2 ...........................................[Enabled ]│
│       Base Address .......................................[3F8h]     │
│       IRQ ................................................[4]        │
│                                                                     │
│     Parallel Port ...........................................[Enabled ]│
│       Base Address .......................................[378h]     │
│       IRQ ................................................[7]        │
│       Operation Mode .....................................[EPP]      │
│         ECP DMA Channel ..................................[-]        │
│                                                                     │
│     Floppy Disk Controller .........................................[Enabled ]│
│     IDE Controller .......................................[ Both ]   │
│     PS/2 Mouse Controller .........................................[Enabled ]│
│     USB Host Controller..............................................[Enabled ]│
│       USB Legacy Mode ...............................................[Disabled]│
│                                                                     │
│     Onboard Audio Chip...............................................[Enabled ]│
│     Game Port Address................................................[201]     │
│     MIDI Port Address ...............................................[330]     │
│     MIDI Port IRQ....................................................[5]       │
│     Onboard Modem Chip ..........................................[Disabled]│
│     Onboard Ethernet Chip ..........................................[Enabled ]│
│                                                                     │
└─────────────────────────────────────────────────────────────────────┘
```

```
                    Onboard Peripherals

    Serial Port 1.................... [Disabled]
       Base Address ................. [----]
       IRQ .......................... [-]
    Serial Port 2.................... [Enabled]
       Base Address ................. [3F8h]
       IRQ .......................... [4]

    Parallel Port ................... [Enabled]
       Base Address ................. [378h]
       IRQ .......................... [7]
       Operation Mode ............... [EPP]
         ECP DMA Channel ............ [-]

    Floppy Disk Controller .......... [Enabled]
    IDE Controller .................. [Both]
    PS/2 Mouse Controller ........... [Enabled]
    USB Host Controller ............. [Enabled]
      USB Legacy Mode ............... [Enabled]

    Onboard Audio Chip .............. [Enabled]
    Game Port Address ............... [201]
    MIDI Port Address ............... [330]
    MIDI Port IRQ ................... [5]
    Onboard Modem Chip .............. [Disabled]
    Onboard Ethernet Chip ........... [Enabled]
```

NOTE: This screen can be seen on Acer Power Sxb model.

The following table describes the parameters found in this menu. Settings in **boldface** are the default and suggested settings.

Parameter	Description	Options
Serial Port 1	Lets you enable or disable the serial port 1.	Enabled or **Disabled**
Base Address	Lets you set a logical base address for each serial port. This parameter is configurable only if the Serial Port parameter is enabled.	
IRQ	Lets you assign an interrupt for each serial port. This parameter is configurable only if the Serial Port parameter is enabled.	
Serial Port 2	Lets you enable or disable the serial port 2.	**Enabled** or Disabled
Base Address	Lets you set a logical base address for each serial port. This parameter is configurable only if the Serial Port parameter is enabled.	**3F8h**, 3E8h, 2E8h
IRQ	Lets you assign an interrupt for each serial port. This parameter is configurable only if the Serial Port parameter is enabled.	**4** or 11
Parallel Port	Lets you enable or disable the parallel port.	**Enabled** or Disabled
Base Address	Lets you set a logical base address for the parallel port. This parameter is configurable only if the Parallel Port parameter is enabled.	**378h**, 278h
IRQ	Lets you assign an interrupt for the parallel port. This parameter is configurable only if the Parallel Port parameter is enabled.	5 or **7**

Parameter	Description	Options
Operation Mode	Lets you set your parallel port's operation mode. This parameter is configurable only if the Parallel Port parameter is enabled.	Standard Parallel Port (SPP) Bidirectional **Enhanced Parallel Port (EPP)** Extended Capabilities Port (ECP)
ECP DMA Channel	Allows you to assign a DMA channel for the ECP parallel port function. This parameter is configurable only if you select the Extended Capabilities Port (ECP) as the operation mode.	**1**, 3
Floppy Disk Controller	Lets you enable or disable the onboard floppy disk controller.	**Enabled** or Disabled
IDE Controller	Lets you enable or disable the onboard primary, secondary or both IDE interfaces.	Primary, **Both**, or Disabled
PS/2 Mouse Controller	Lets you enable or disable the onboard PS/2 mouse controller	**Enabled** or Disabled
USB Host Controller	Lets you enable or disable the onboard USB host controller.	**Enabled** or Disabled
USB Legacy Mode	Lets you activate or deactivate the USB keyboard connected to your system. When activated, the USB keyboard functions in a DOS environment.	Enabled or **Disabled**
Onboard Audio Chip	Lets you enable or disable the onboard audio controller	**Enabled** or Disabled
Game Port Address	Lets you set the I/O base address of the game port.	**201**, 209, Disabled
MIDI Port Address	Lets you set the I/O base address of the midi port.	**330**, 300, Disabled
MIDI Port IRQ	Lets you set the IRQ channel of the midi port.	**5**, 7
Onboard Modem Chip	Lets you enable or disable the onboard modem controller.	Enabled or **Disabled**
Onboard Ethernet Chip	Lets you enable or disable the onboard ethernet (LAN) controller.	**Enabled** or Disabled

Power Management

The Power Management menu lets you configure the system power-management feature. It works only under APM mode.

IMPORTANT: If an ACPI-aware operating system such as Windows 98 or Windows 2000 is installed in ACPI mode, the operating system will use the ACPI interfaces. Then the settings in Power Management page is non-effective.

The following screen shows the Power Management parameters and their default settings:

```
┌──────────────────────────────────────────────────────────────────┐
│                        Power Management                           │
├──────────────────────────────────────────────────────────────────┤
│                                                                    │
│    Power Management Mode ....................................[Enabled ]  │
│     IDE Hard Disk Standby Timer  ...........................[OFF]        │
│     System Sleep Timer ...........................................[30] Minute(s) │
│      Sleep Mode ......................................................[Suspend]  │
│                                                                    │
│    Power Switch < 4 sec............................................[Power Off]   │
│                                                                    │
│    System wake-up event                                            │
│     Modem Ring Indicator.........................................[Enabled ]      │
│     PCI Power Management ......................................[Enabled ]        │
│                                                                    │
│    Restart on AC/Power Failure ................................[Enabled ]        │
│                                                                    │
│                                                                    │
│                                                                    │
│                                                                    │
└──────────────────────────────────────────────────────────────────┘
```

The following table describes the parameters found in this menu. Settings in **boldface** are the default and suggested settings.

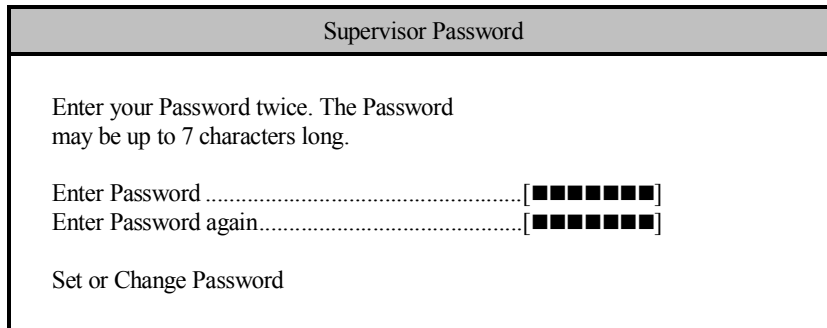| Parameter	Description	Options
Power Management Mode	Allows you to reduce the system's power consumption. When enabled, the IDE hard disk and system timers become configurable.	**Enabled** or Disabled
IDE Hard Disk Standby Timer	Allows the hard disk to enter Standby mode after inactivity of 1 to 15 minutes, depending on your setting.	1 to 15 minutes, or **Off**
System Sleep Timer	Automatically puts the system to power-saving mode after a specified period of inactivity. Any keyboard or mouse action, or any activity detected from the IRQ channels resumes system operation.	2, 5, 10, 15, 20, **30**, 40, 50...120 minutes, or Off
Sleep Mode	Lets you specify the power-saving mode that the system will enter after a specified period of inactivity. This parameter is configurable only if the System Sleep Timer is enabled.	Standby or **Suspend**
Power Switch < 4 sec.	Lets you specify whether to automatically turn off the machine or put the system to Suspend mode when the power switch is pressed for less than 4 seconds.	**Power Off** or Suspend
System Wake-up Event	Lets you specify the activity that will resume the system to normal operation.	

Parameter	Description	Options
Modem Ring Indicator	Wakes the system from Sleep mode once any fax/modem activity is detected.	**Enabled** or Disabled
PCI Power Management	Allows the system to be awaken by the PME function.	**Enabled** or Disabled
Restart on AC/ Power Failure		**Enabled** or Disabled

Boot Options

This option allows you to specify your preferred settings for bootup.

The following screen appears if you select Boot Options from the main menu:

```
                          Boot Options

     Boot Sequence
        1st. [Floppy Disk A:] ▶
        2nd.[Hard Disk C:] ▶
        3rd.[IDE CD-ROM] ▶



     Fast Boot.................................................[ Auto ]
     Silent Boot............................................[Enabled ]
     Num Lock After Boot..........................................[Enabled ]
     Memory Test...............................................[Disabled]
     *Configuration Table .........................................[Enabled ]

     Language Type ......................................[English]

```
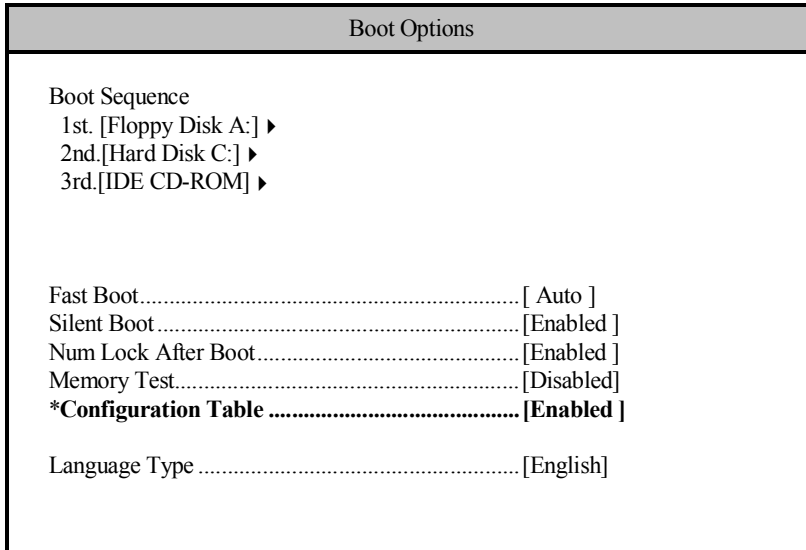
NOTE: *This item can only be seen when you are in the Advanced Level.

The following table describes the parameters found in this menu. Settings in **boldface** are the default and suggested settings.

Parameter	Description	Options
Boot Sequence	Allows you to specify the boot search sequence.	**Floppy Disk** Hard Disk IDE CD-ROM
Fast Boot	Allows you to define your system's booting process, whether to skip some POST routines or proceed with the normal booting process.	**Auto** or Disabled
Silent Boot	When enabled, BIOS is in graphical mode and displays only an identification logo during POST and while booting. Then, the screen displays the operating system prompt (as in DOS) or logo (as in Windows). If any error occurs while booting, the system automatically switches to the text mode. You may also switch to the text mode while booting by pressing **F9** after you hear a beep that indicates the activation of the keyboard.	**Enabled** or Disabled
Num Lock After Boot	Allows you to activate or deactivate the Num Lock function upon booting.	**Enabled** or Disabled
Memory Test	Lets you specify whether you want BIOS to perform or bypass the RAM test during POST.	Enabled or **Disabled**
Configuration Table	Display preboot system configuration table.	**Enabled** or Disabled
Language Type	Select a language type as a based language for showing messages. Press F5 to switch language version.	**English** or Japanese

Date and Time

The following screen appears if you select the Date and Time option from the main menu:

Date and Time
Date ....[Mon Jan 03, 2000]
Time ....[HH:MM:SS]

The following table describes the parameters found in this menu:

Parameter	Description	Options
Date	Lets you set the date following the weekday-month-day-year format.	Weekday: Sun, Mon, Tue, Wed, Thu, Fri, Sat Month: Jan, Feb...Dec Day: 1 to 31 Year: 1980 to 2099
Time	Lets you set the time following the hour-minute-second format.	Hour: 0 to 23 Minute: 0 to 59 Second: 0 to 59

System Security

The Setup program has a number of security features to prevent unauthorized access to the system and its data.

The following screen appears if you select System Security from the main menu:

```
┌─────────────────────────────────────────────────────────────────┐
│                        System Security                          │
├─────────────────────────────────────────────────────────────────┤
│   Supervisor Password...............................[None]      │
│   User Password .....................................[-----]    │
│                                                                 │
│   Disk Drive Controller                                         │
│    Floppy Drive .....................................[Normal]   │
│    Hard Disk Drive ..................................[Normal]   │
│                                                                 │
│   Processor Serial Number ...........................[Disabled] │
│                                                                 │
│                                                                 │
│                                                                 │
│                                                                 │
│                                                                 │
│                                                                 │
└─────────────────────────────────────────────────────────────────┘
```

The following table describes the parameters found in this menu. Settings in **boldface** are the default and suggested settings.

Parameter	Description	Options
Supervisor Password	Prevents unauthorized access to the BIOS utility.	**None** or Present. The Present setting allows you to set a Setup password. For instructions on how to set a Setup password, refer to "Setting a Password" on page 41.
User Password	Secures your system against unauthorized use. Once you set this password, you have to type it whenever you boot the system.	
Disk Drive Controller	Allows you to protect your system's floppy drive and hard disk data from being modified (possible under DOS mode only).	
Floppy Drive	Protects your floppy drive data from being modified.	**Normal**, Write Protect All Sectors, Write Protect Boot Sectors
Hard Disk Drive	Protects your hard disk data from being modified.	**Normal**, Write Protect All Sectors, Write Protect Boot Sectors
Processor Serial Number	Enables or Disables the processor serial number (only if system have PIII processor).	Enabled or **Disabled**

Setting a Password

1. Enter the BIOS utility and select "System Security" .

2. Highlight the "Supervisor Password" parameter and press Enter. The following screen appears:

```
┌─────────────────────────────────────────────────────────────────────┐
│                         Supervisor Password                         │
├─────────────────────────────────────────────────────────────────────┤
│                                                                     │
│   Enter your Password twice. The Password                           │
│   may be up to 7 characters long.                                   │
│                                                                     │
│   Enter Password ...................................[■■■■■■■]        │
│   Enter Password again..........................[■■■■■■■]            │
│                                                                     │
│   Set or Change Password                                            │
│                                                                     │
└─────────────────────────────────────────────────────────────────────┘
```

NOTE: You can enable the "User Password" only if the "Supervisor Password" has been set.

3. Type a password. The password may consist of up to seven characters. Then press **Enter**.

NOTE: Be very careful when typing your password because the actual characters do not appear on the screen.

4. Retype the password then press **Enter**.

5. After setting the password, highlight the "Set or Change Password" option.

6. Press **Esc** to return to the System Security screen.

7. Press **Esc** to return to the Main menu.

8. Press **Esc** to exit the BIOS utility. A dialog box appears asking if you want to save the CMOS data.

9. Select "**Yes**" to save the changes and reboot the system.

10. After rebooting, turn off the system then open the housing.

If you have set a Supervisor password, the next time you want to enter the BIOS utility, you must key-in your Supervisor password.

If you have set a User password, you must enter that password every time you boot your system.

Changing or Removing the Password

If you want to **change one of your passwords**, do the following:

1. Enter the BIOS utility and select "System Security".

2. Highlight the "Supervisor Password" parameter (for Supervisor password) or the "User Password" parameter (a Supervisor Password must be set first before you can change the User password). The Password menu appears.

3. From the Password menu, highlight the "Set or Change Password" option.

4. Enter a new password.

5. Press **Esc** to return to the System Security screen.

6. Press **Esc** to return to the main menu.

7. Press **Esc** to exit the BIOS utility. A dialog box appears asking if you want to save the CMOS data.

8. Select "**Yes**" to save the changes.

To remove the password, simply select the "Supervisor Password" parameter (for Supervisor password) or the "User Password" parameter (a Supervisor Password must be set first before you can change the User password) from the System Security menu and set it to "None".

Bypassing the Password

If you forgot your password, you can bypass the password security feature thru hardware configuration. Follow these steps to bypass the password:

1. Turn off and unplug the system.

2. Open the system housing and set **JP11** to **2-3** to bypass the password function.

3. Turn on the system and enter the BIOS utility. This time, the system does not require you to type-in a password.

You can either change the existing password or remove it by selecting None. Refer to "Changing or Removing the Password" on page 42 for the procedure.

Advanced Options

NOTE: The Advanced Options menu is only available if you press **F8** or **Alt + F4** in the main menu.

The "Advanced Options" menu allows you to configure the system memory and PCI device settings.

The following screen shows the Advanced Options parameters:

Advanced Options
• Memory/Cache Options • PnP/PCI Options
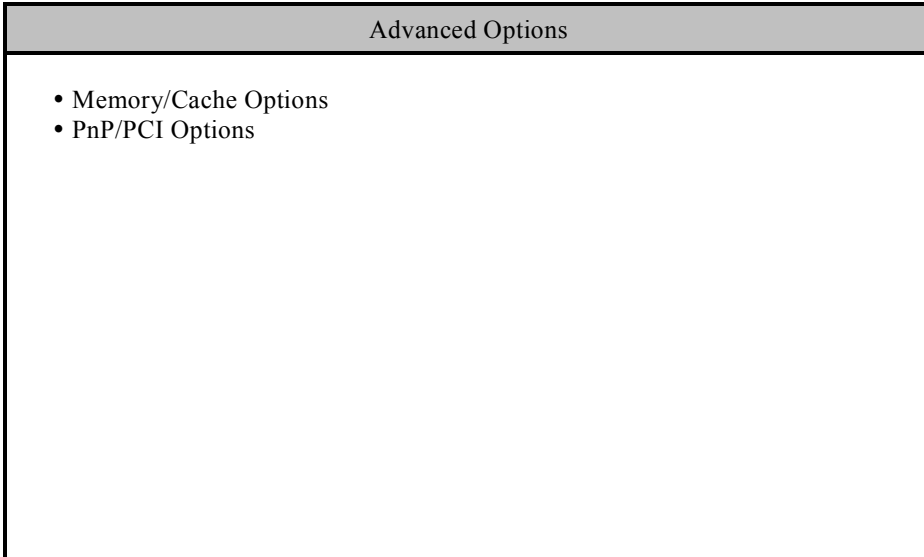
CAUTION: Do not change any settings in the Advanced Options menu if you are not a qualified technician to avoid damaging the system.

Memory/Cache Options

Selecting "Memory/Cache Options" from the Advanced Options menu displays the following screen:

This menu lets you configure the system memory.

Memory /Cache Options
Level 1 Cache ....[Enabled] Level 2 Cache ....[Enabled] Memory at 15MB-16MB Reserved for ....[System]

The following table describes the parameters found in this sub-menu. Settings in **boldface** are the default and suggested settings.

Parameter	Description	Options
Level 1 Cache (processor Cache)	Lets you enable or disable the primary cache memory, i.e., the processor memory.	**Enabled** or Disabled
Level 2 Cache	Lets you enable or disable the secondary cache memory.	**Enabled** or Disabled
Memory at 15MB-16MB Reserved for	To prevent memory address conflicts between the system and expansion boards, reserve this memory range for the use of either the system or an expansion board. Some VGA cards have required settings for this feature. Check your VGA card manual before setting this parameter.	**System** or Add-on card

PnP/PCI Options

The PnP/PCI Options menu allows you to specify the settings for your PCI devices. Selecting this option displays the following screen:

```
┌─────────────────────────────────────────────────────────────────┐
│                        PnP/PCI Options                          │
├─────────────────────────────────────────────────────────────────┤
│   PCI IRQ Setting ...................................[Auto]      │
│                                                                 │
│                          INTA  INTB  INTC  INTD                 │
│   PCI Slot 1 ..................................[--]   [--]   [--]   [--] │
│   PCI Slot 2 ..................................[--]   [--]   [--]   [--] │
│   PCI Slot 3 ..................................[--]   [--]   [--]   [--] │
│                                                                 │
│                                                                 │
│   PCI IRQ Sharing...................................[Yes]       │
│   VGA Palette Snoop.................................[Disabled]   │
│   Graphics Aperture Size...........................[64 ] MB      │
│   Plug and Play OS..................................[Yes]        │
│   Reset Resource Assignments.................[No ]              │
│                                                                 │
│                                                                 │
└─────────────────────────────────────────────────────────────────┘
```

The following table describes the parameters found in this sub-menu. Settings in **boldface** are the default and suggested settings.

Parameter	Description	Options
PCI IRQ Setting	Allows you to automatically or manually configure the Plug-and-Play (PnP) devices installed in your system. Refer to your device manual for technical information about the PCI card.	**Auto** or Manual
PCI Slot 1 / 2 / 3	Allows you to manually assign an interrupt for each PCI device installed in your system. When the PCI IRQ Settings is set to Auto, BIOS automatically assigns the available IRQs to the PCI devices.	
PCI IRQ Sharing	Allows you to assign the same IRQ to two different devices.	**Yes** or No
VGA Palette Snoop	Enables the palette snooping feature (if you installed more than one VGA card in the system) allowing the control palette register (CPR) to manage and update the VGA RAM DAC (Digital Analog Converter, a color data storage) of each VGA card installed in the system. The snooping process lets the CPR send a signal to all the VGA cards so that they can update their individual RAM DACs. The signal goes through the cards continuously until all RAM DACs data has been updated. This allows the display of multiple images on the screen. Some VGA cards have required settings for this feature. Check your VGA card manual before setting this parameter.	Enabled or **Disabled**
Graphics Aperture Size	This parameter determines the effective size of the graphics aperture. Graphics aperture is the address range that the AGP video and the CPU use to manage graphical objects.	The lowest setting is 8 MB and the highest is 256 MB.

Parameter	Description	Options
Plug and Play OS	Set to **Yes** if the computer is running on Win95/Win98 or Win2000. For any other OS, set to No.	**Yes** or No
Reset Resource Assignments	When enabled, avoids IRQ conflict when installing non-PnP and PnP PCI cards. This clears all resource assignments and allows BIOS to reassign resources to all installed PnP devices the next time the system boots.	Yes or **No** After clearing the resource data, it is recommended that you reset the parameter to its default, i.e., No.

Chipset Settings

The Chipset Settings will be shown only if you press **Alt + F4** in main menu:

```
                   Advanced Options

     • Memory/Cache Options
     • PnP/PCI Options
     • *Chipset Settings
```

Press Enter to view the Chipset settings information.

The following screen displays the Chipset settings menu:

```
                    Chipset Settings

    Spread Spectrum ........................................ [ Enabled ]
    Memory Stable Register ............................. [ Enabled ]
    RIMM TRDLY value .................................. [ Auto ]
    ICH Audio Controller ................................. [ Enabled ]
    ICH Modem Controller .............................. [ Disabled ]
    Delay Transaction ..................................... [ Enabled ]
```

Parameter	Description	Options
Spread Spectrum	In order to force EMI pass, this function allows frequency to modulate in an acceptable range.	**Enabled** or Disabled
Memory Stable Register	This function enables memory run in stable status.	**Enabled** or Disabled
RIMM TRDLY value	This field defines the minimum round trip propagation time of the RAMbus channel in unit of Rambus clocks.	0, 1, 2, 3, 4, or **Auto**
ICH Audio Controller	Enables ICH audio chipset function	**Enabled** or Disabled
ICH Modem Controller	Enables ICH modem chipset function only when AMR adapter card is available.	Enabled or **Disabled**
Delay Transaction	This function frees PCI bus occupied by the processor request transaction.	**Enabled** or Disabled

Load Default Settings

You need to reload the BIOS default settings every time you make changes to your system hardware configuration (such as memory size, CPU type, hard disk type, etc.); otherwise, BIOS will keep the previous CMOS settings. Selecting this option displays the following dialog box:

```
+------------------------------------------+
|          Load Default Settings           |
+------------------------------------------+
|                                          |
|    Do you want to load default settings? |
|                                          |
|         [Yes]      *[No]                 |
|                                          |
+------------------------------------------+
```

Choosing **Yes** enables BIOS to automatically detect the hardware changes that you have made in your system. This option also allows you to restore the default settings.

Choosing **No** returns you to the main menu without loading the default settings.

Abort Settings Change

Selecting the Abort Settings Change option from the main menu displays the following dialog box:

Abort Settings Change
Do you really want to abort settings change?
*[Yes]   [No]
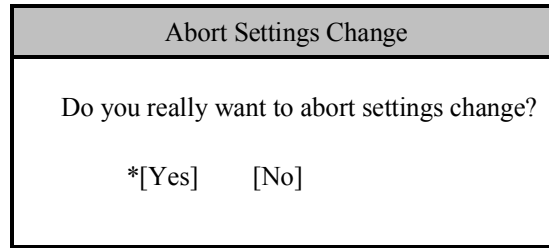
Choosing **Yes** discards all the changes that you have made and reverts the parameters to their previously saved settings.

Choosing **No** returns you to the main menu. BIOS retains all changes that you have made.

Exiting Setup

To exit the BIOS utility, simply press **Esc**. The following dialog box appears:

```
┌─────────────────────────────────────────────┐
│                 Exit Setup                   │
├─────────────────────────────────────────────┤
│                                              │
│    Settings have been changed.               │
│    Do you want to save CMOS settings?        │
│                                              │
│          *[Yes]      [No]                    │
│                                              │
└─────────────────────────────────────────────┘
```
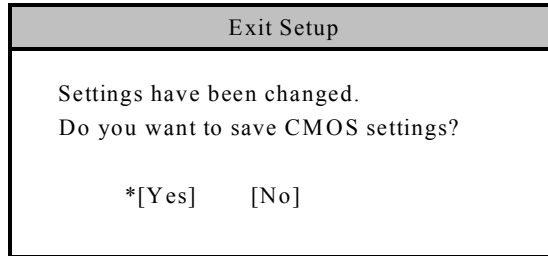
Select **Yes** to exit Setup. Select **No** to return to the main menu. If you have made changes in the parameter settings, you will be asked if you want to keep the changes made to the BIOS. Select **Yes** to save your changes before you exit Setup. Select **No** to discard all changes and exit Setup.

Machine Disassembly and Replacement

This chapter contains step-by-step procedures on how to disassemble the AcerPower Sx for maintenance and troubleshooting.

To disassemble the computer, you need the following tools:

❑ Wrist grounding strap and conductive mat for preventing electrostatic discharge

❑ Flat-bladed screwdriver

❑ Phillips screwdriver

❑ Hexagonal screwdriver

❑ Plastic stick

NOTE: The screws for the different components vary in size. During the disassembly process, group the screws with the corresponding components to avoid mismatches when putting back the components.

Removing a DIMM

1. Press the holding clips on both sides of the socket outward to release the DIMM.

2. Gently pull the DIMM out of the socket.
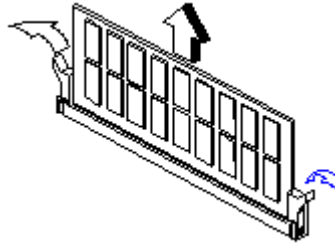
NOTE: The system automatically detects the amount of memory installed. Run Setup to view the new value for total system memory and make a note of it.

Removing the CPU Fan-sink and CPU Board

1. Detach the fan-sink and fan from the CPU.
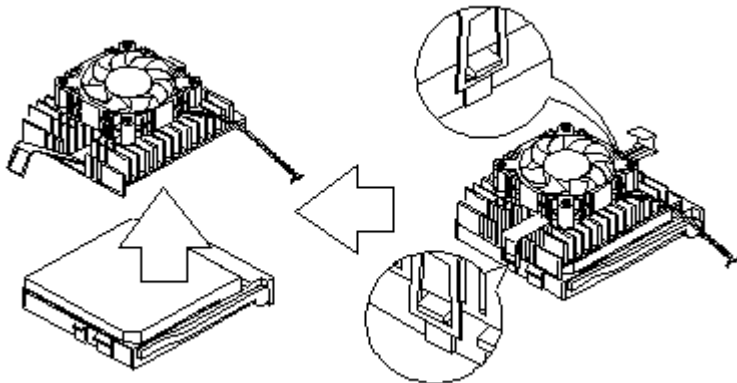
2. Pull up the socket lever.
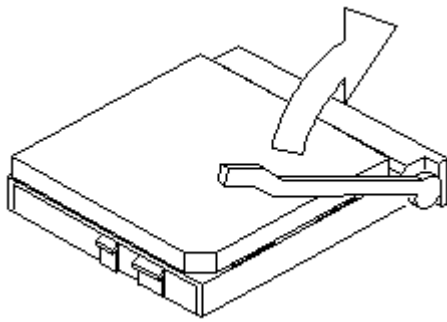
3. Remove the CPU.
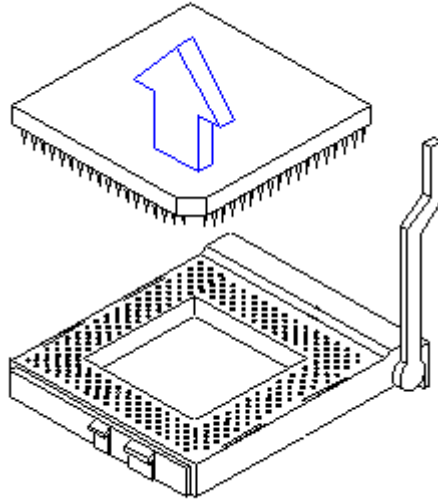
Opening the Housing

IMPORTANT: Turn off the system power (unplug the power cord) before opening the system or connecting or removing any peripheral device.

1. Place the system unit on a flat, steady surface.

2. Remove the four screws from the rear panel. Set the screws aside. You will need them when replacing the housing cover.
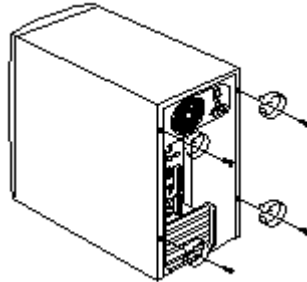
3. Push the housing cover slightly backward.

4. Pull the housing cover upward and remove it from the chassis.
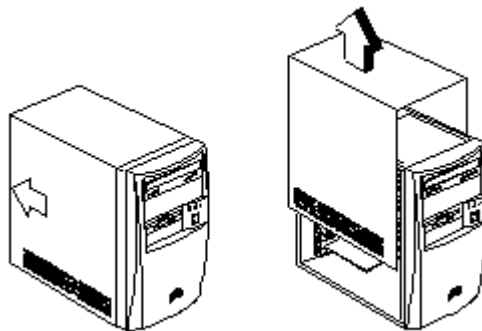
Removing an Expansion Board

1. Remove the screw on the bracket of an expansion board. Set the screw aside. You will need it when replacing the expansion board.

2. Gently pull out the board to remove it from the expansion slot.
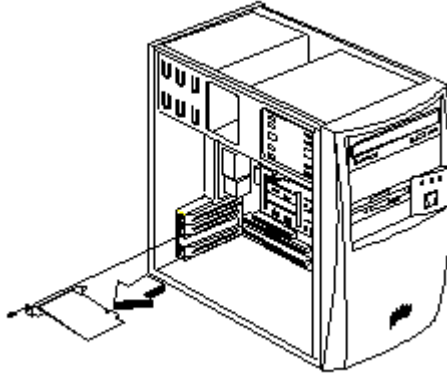
Removing a 3.5-inch Drive

Follow these steps to install a 3.5-inch diskette drive or a hard disk drive:

1. Disconnect the disk drive cables and the power cable.
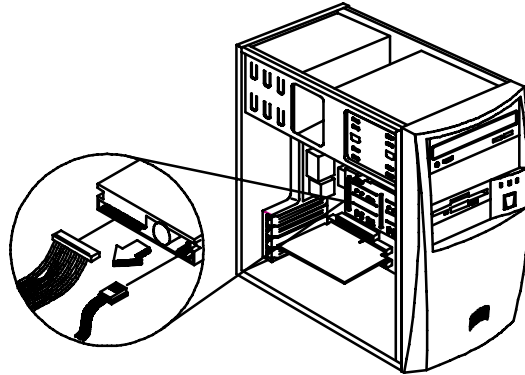
2. Remove the 3.5-inch drive frame from the housing by pressing the tab on top and pivoting the frame outward.
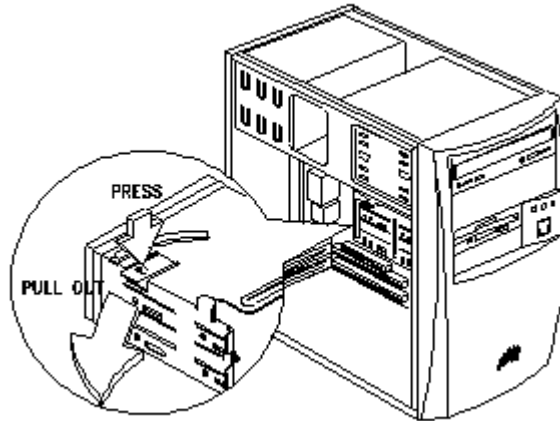
NOTE: A metal drive cover should be pulled out before you install a new drive into an empty 3.5-inch bay. This cover should be removed if a 3.5-inch drive is installed. The function of the cover is to prevent EMI effects.
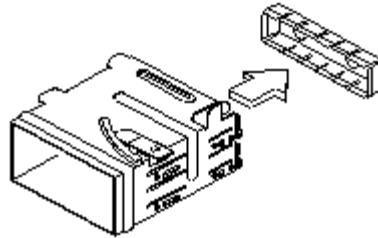
3. Remove the screws along the sides of the drive frame and carefully pull out the 3.5-inch disk drive.
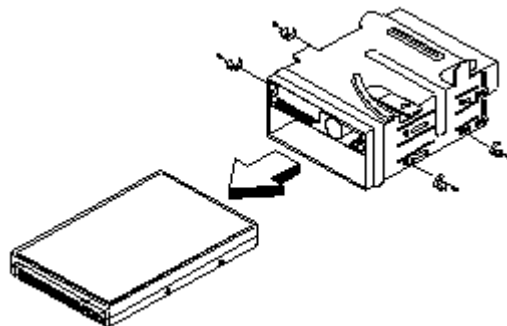
Removing a 5.25-inch Drive

To remove a 5.25-inch diskette drive or a CD-ROM drive:

1. Disconnect the diskette drive cable and the power cable.
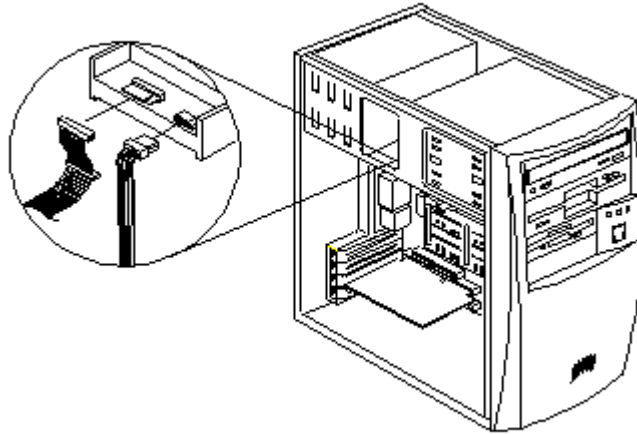
2. Remove the screws on the sides and gently pull out the diskette drive or CD-ROM to remove it from the housing.
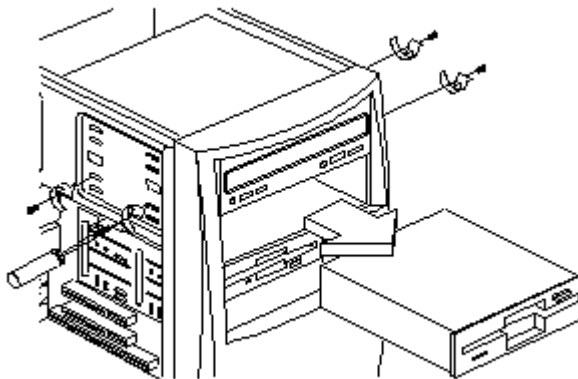
Removing the Main board

1. Lay the housing on its side with the open area facing upward.
2. Remove all the necessary screws and carefully pull out the main board.
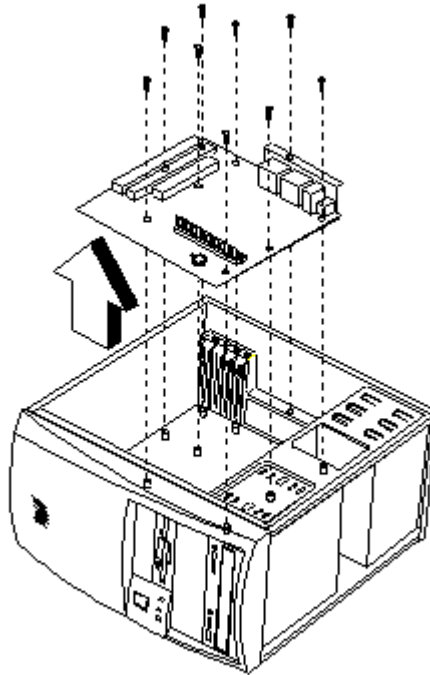
Removing a Daughterboard

1. Remove the two screws from the daughterboard.
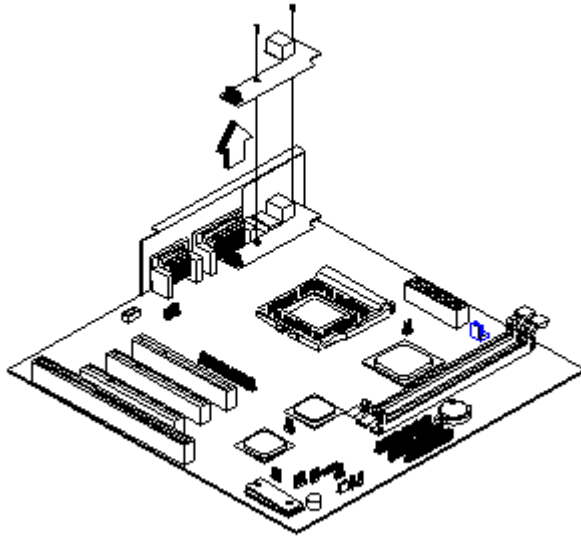
2. Pull up the daughterboard.

Troubleshooting

This chapter provides troubleshooting information for AcerPower Sx model:

❑   Power-On Self-Test (POST)

❑   Index of Error Messages

❑   Index of Error Codes and Error Beeps

❑   Index of Error Symptoms

❑   Undetermined Problems

Power-On Self-Test (POST)

Each time you turn on the system, the Power-on Self Test (POST) is initiated. Several items are tested during POST, but is for the most part transparent to the user.

The Power-On Self Test (POST) is a BIOS procedure that boots the system, initializes and diagnoses the system components, and controls the operation of the power-on password option. If POST discovers errors in system operations at power-on, it displays error messages on screen, generates a check point code at port 80h or even halts the system if the error is fatal.

The main components on the main board that must be diagnosed and/or initialized by POST to ensure system functionality are as follows:

❏ Microprocessor with built-in numeric co-processor and cache memory subsystem

❏ Direct Memory Access (DMA) controller

❏ Interrupt system

❏ Three programmable timers

❏ ROM subsystem

❏ RAM subsystem

❏ RTC RAM subsystem and real time clock/calendar with battery backup

❏ Onboard serial interface controller

❏ Onboard parallel interface controller

❏ Embedded hard disk interface and one diskette drive interface

❏ Keyboard and auxiliary device controllers

❏ I/O ports

    ❏ PS/2-compatible mouse port

    ❏ PS/2-compatible keyboard port

❏ Serial ports

❏ Parallel ports

❏ USB port

POST Check Points

When POST executes a task, it uses a series of preset numbers called check point to be latched at port 80h, indicating the stages it is currently running. This latch can be read and shown on a debug board.

Table D-1 describes the Acer common tasks carried out by POST. A unique check point number represents each task.

Table D-1 POST Check Points

Check Point	Description
04H	Determines if the current booting procedure is from cold boot (press reset button or turn the system on), from warm boot (press CTRL + ALT + DEL or from exiting BIOS setup. Check CPU ID, dispatch shutdown Path. **NOTE:** At the beginning of POST, port 64 bit 2 (8042 system flag) is read to determine whether this POST is caused by cold or warm boot. If it is a cold boot, a complete POST is performed. If it is a warm boot, the chip initialization and memory test is eliminated from he POST routine.
08H	Disables Non-Maskable Interrupt (NMI), Alarm Interrupt Enable (AIE), Periodical Interrupt Enable (PIE), and Update-ended Interrupt Enable (UIE). **NOTE:** These interrupts are disabled in order to avoid any mis-action happened during the POST routine.
09H	Initializes chipset point (I)
10H	DMA Controller (8327) test and initialization.
14H	System timer (8254) test and initialization
18H	Memory refresh test; refresh occurrence verification (IRQ0)
1CH	1. Verifies CMOS shutdown byte, battery and check sum. **NOTE:** Several parts of the POST routine require the system to be in protected mode. When returning to real mode from protected mode, the processor is reset, therefore POST is re-entered. In order to prevent re-initialization of the system, POST reads the shutdown code stored in location 0Fh in CMOS RAM. Then it jumps around the initialization procedure to the entry point. The CMOS shutdown byte verification assures that CMOS 0Fh area is fine to execute POST properly. 2. Initializes CMOS default setting 3. Initializes RTC time base **NOTE:** The RTC has an embedded oscillator that generates 32.768 Hz frequency. To initialize the RTC time base, turn on this oscillator and set a divisor to 32768 so that RTC can count time correctly.
1EH	1. Search DRAM existence on each DRAM slot 2. DRAM type determination
2CH	1. Tests 384K base memory 2. Set default SS:SP = 0:400 **NOTE:** The 384K base memory area is tested for POST execution. The remaining memory ares is tested later.
30H	System shadow RAM
20H	1. Tests keyboard controller (8041/8042) 2. Determines keyboard type (AT, XT, PS/2)
24H	1. Test programmable interrupt controller 2. Initializes system interrupt
26H	Initializes GPIO
34H	DRAM sizing
36H	Initialize I/O APIC
3CH	Sets interrupt service for POST
2DH	Set CPU (s) multiple
3FH	Enables/Disables USB Host Controller

Check Point	Description
35H	PCI pass 0
4EH	Scan PnP Devices
4FH	Config PnP Devices
40H	Initial PCI (1)
41H	Initial PCI (2)
42H	Initial PCI (3)
44H	Initial PCI (4)
45H	Initial PCI (5)
50H	Initializes video display **NOTE:** If system has any display card, it should be initialized via its I/O ROM or corresponding initialization program.
51H	Copy F-seg from ROM into shadow RAM
54H	Process VGA shadow region
4CH	Check CPU brand, ID and external frequency
58H	1. Displays Acer (or OEM) logo (if necessary) 2. Displays Acer copyright message (if necessary). 3. Displays BIOS serial number.
59H	Hook INT 1CH for Quiet Boot.
64H	Tests keyboard interface **NOTE:** The keyboard LEDs should flash once.
5CH	Memory test (except the 384K base memory)
5EH	Load Pentium Pro CPU update code
5AH	Test SM RAM
5FH	Enables/Disables USB Function
60H	1. Initializes SRAM cache capacity 2. Enables the cache function
70H	Initializes parallel port(s)
74H	Initializes parallel port(s)
78H	Reset math coprocessor
7CH	Check and initialize pointing device
80H	Set security status
82H	Prepare entering SETUP for user pressing CTRL + ALT DEL.
84H	Keyboard device initialization
6CH	1. Tests and initializes FDD 2. The FDD LED should flash once and its head should be positioned
88H	1. Sets HDD type and features (i.e. transfer speed, mode,....) 2. Tests HDD controller
90H	Displays POST status
93H	Rehook INT 1CH for Quiet Boot
94H	1. Initializes I/O ROM 2. I/O ROM is an optional extension of the BIOS located on an installed add-on card as part of the I/O subsystem. POSt detects I/O ROMs and gives them opportunity to initialize themselves and their hardware environment.
96H	Initializes PCI I/O ROM
A0H	Sets time and day
A4H	Initializes security features
A2H	Initializes setup items
A8H	Setup SMI parameters

Check Point	Description
ACH	1. Enables NMI 2. Checks parity, if set 3. Clear screen
B0H	1. Checks power-on password 2. Displays configuration mode table 3. Clear memory buffer used for POST
B1H	Bootint

POST Error Messages List

If you cannot run the diagnostics program tests but did receive a POST error message, use "POST Error Messages List" to diagnose system problems. If you did not receive any error message, look for a description of your error symptoms in "Error Symptoms List" on page 70.

NOTE: When you have deemed it necessary to replace an FRU, and have done so, you must run a total system check to ensure that no other activity has been affected by the change. This system check can be done through the diagnostics program.

NOTE: Check all power supply voltages, switch, and jumper settings before you replace the main board. Also check the power supply voltages if you have a "system no-power" condition.

If you are unable to correct the problem by using the "BIOS Messages List" table and "Error Symptoms List" table, go to "Undetermined Problems" on page 76.

NOTE: To diagnose a problem, first find the BIOS error messages in the left column. If directed to a check procedure, replace the FRU indicated in the check procedure. If no check procedure is indicated, the first Action/FRU listed in right column is the most likely cause.

BIOS Messages	Action/FRU
I/O Parity Error	1. System board
CPU Clock Mismatch	1. Enter BIOS Setup and load the default settings. 2. Ensure BIOS setting for processor is set correctly.
Real Time Clock Error CMOS Battery Bad CMOS Checksum Error	1. Enter BIOS Setup and load the default settings. 2. RTC Battery. 3. System Board.
Equipment Configuration Error	1. Ensure the system configuration set in BIOS Setup is correct. 2. Enter BIOS Setup and load the default settings. 3. RTC battery. 4. System board.
System Management Memory Bad Memory Error at MMMM:SSSS:OOOOh	1. Insert the memory modules in the DIMM sockets properly, then reboot the system. 2. Memory module. 3. System board.
RAM Parity Error	1. Enter BIOS Setup to disable parity check. 2. Memory module 3. System board
PS/2 Keyboard Error or Keyboard Not Connected PS/2 Keyboard Interface Error PS/2 Keyboard Locked	1. Re-connect PS/2 keyboard and mouse. 2. Enter BIOS Setup and load the default settings. 3. PS/2 keyboard 4. PS/2 mouse 5. System board
Onboard xxx... Conflict(s)	1. Enter BIOS Setup and load the default settings. 2. Remove all adapter cards that are NOT factory-installed, then reboot the system.
Floppy Disk Controller Error Floppy Drive A Error Floppy Drive B Error	1. Diskette drive cable/connection. 2. Diskette drive. 3. System board
On Board Parallel Port Conflict(s) On Board Serial Port 1 Conflict(s) On Board Serial Port 2 Conflict(s)	1. Enter BIOS Setup and load the default settings. 2. Remove all adapter cards that are NOT factory-installed, then reboot the system.
Floppy Drive(s) Write Protected Hard Disk Drive(s) Write Protected	1. Ensure that the diskette drive is not set to [Write Protected] in the Security Options in BIOS Setup. 2. Load default settings in Setup.

BIOS Messages	Action/FRU
IDE Drive 0 Error IDE Drive 1 Error IDE Drive 2 Error IDE Drive 3 Error	1. Enter BIOS Setup and load the default settings. 2. Check IDE drive jumper. 3. IDE hard disk drive power. 4. IDE hard disk drive cable/connection. 5. IDE hard disk drive.
IRQ Setting Error Expansion ROM Allocation Fail I/O Resource Conflict(s) Memory Resource Conflict(s)	1. Load default settings in Setup. 2. Enter BIOS Setup and set the `Reset Resource Assignments` of the `PnP/PCI Options` to Yes, then reboot the system. 3. Remove all adapter cards that are NOT factory-installed, then reboot the system
PCI Device Error	1. Load default settings in Setup. 2. Enter BIOS Setup and set the `Reset Resource Assignments` of the `PnP/PCI Options` to Yes, then reboot the system. 3. Remove all adapter cards that are NOT factory-installed, then reboot the system.
PS/2 Pointing Device Interface Error PS/2 Pointing Device Error	1. Re-connect PS/2 keyboard and mouse. 2. Enter BIOS Setup and load the default settings. 3. PS/2 mouse 4. PS/2 keyboard 5. System board
DMI Table Was Destroyed	1. Flash BIOS
Press CTRL + ALT + DEL key to enter Setup or F1 key to continue	1. Press CTRL + ALT + DEL to enter Setup and reconfigure the system.
Press ESC to turn off NMI, or any key to reboot	1. Press ESC to reject NMI error or press any other key to reboot the system.
Insert system diskette and press ENTER key to reboot	1. Insert a bootable disk into the floppy disk drive or remove this disk if a hard disk is installed.

Error Symptoms List

NOTE: To diagnose a problem, first find the error symptom in the left column. If directed to a check procedure, replace the FRU indicated in the check procedure. If no check procedure is indicated, the first Action/FRU listed in right column is the most likely cause

.

Error Symptom	Action/FRU
Processor / Processor Fan	
NOTE: Normally, the processor fan should be operative, and the processor clock setting should be exactly set to match its speed requirement before diagnosing any processor problems.	
Processor fan does not run but power supply fan runs.	1. Ensure the system is not in power saving mode. See "Power Management" in chapter 2. 2. With the system power on, measure the voltage of processor fan connector. Its reading should be +12Vdc. 3. System board.
Processor test failed.	1. Processor 2. System board
System Board and Memory	
NOTE: Ensure the memory modules are installed properly and the contact leads are clean before diagnosing any system problems.	
Memory test failed.	1. See "Memory" 2. System board
Incorrect memory size shown or repeated during POST.	1. Insert the memory modules in the DIMM sockets properly, then reboot the system. 2. Memory module. 3. System board.
System works but fails to enter power saving mode when the Power Management Mode is set to Enabled, and power saving timer set in BIOS has elapsed.	1. Enter BIOS Setup and load default settings. In Windows 98, check settings in Power Management Property of Control Panel. 2. Reload software from Recovery CD.
System hangs before system boot.	1. See "Index of Symptoms" 2. See "Undetermined Problems"
System hangs after system boot.	1. Execute a system test and set it to stop at "Halt on Error" to see the potential cause of the problem. 2. See "Undetermined Problems".
Blinking cursor only; system does not work.	1. Diskette/IDE drive connection/cables 2. Diskette/IDE disk drives 3. See "Undetermined Problems". 4. System board
Diskette Drive	
NOTE: Ensure the diskette drive is configured correctly in BIOS Setup and its read/write head is clean before diagnosing any diskette drive problems.	
Media and drive are mismatched.	1. Ensure the diskette drive is configured correctly in the Disk Drives of BIOS Setup. 2. Ensure the diskette drive is correctly formatted. 3. Diskette drive connection/cable 4. Diskette drive 5. System board
Diskette drive does not work.	1. Ensure the diskette drive is not set to None in the Disk Drives of BIOS Setup. 2. Diskette drive power 3. Diskette drive connection/cable 4. Diskette drive 5. System board

Error Symptom	Action/FRU
Diskette drive read/write error.	1. Diskette. 2. Ensure the diskette drive is not set to `Write protect` in the Security Options of BIOS Setup. 3. Diskette drive cable. 4. Diskette drive. 5. System board.
Diskette drive LED comes on for more than 2 minutes when reading data.	1. Diskette 2. Diskette drive connection/cable 3. Diskette drive 4. System board
Diskette drive LED fails to light, and the drive is unable to access for more than 2 minutes.	1. Diskette 2. Diskette drive power 3. Diskette drive connection/cable 4. Diskette drive 5. System board
Diskette drive test failed.	1. Diskette 2. Diskette drive 3. Diskette drive cable 4. System board
Hard Disk Drive	
NOTE: Ensure hard disk drive is configured correctly in BIOS Setup, cable/jumper are set correctly before diagnosing any hard disk drive problems.	
Hard disk drive test failed.	1. Enter BIOS Setup and Load default settings. 2. Hard disk drive cable. 3. Hard disk drive. 4. System board.
Hard disk drive cannot format completely.	1. Enter BIOS Setup and Load default settings. 2. Hard disk drive cable. 3. Hard disk drive. 4. System board.
Hard disk drive has write error.	1. Enter BIOS Setup and Load default settings. 2. Hard disk drive.
Hard disk drive LED fails to light, but system operates normally.	1. With the system power on, measure the voltage of hard disk LED connector. 2. Hard drive LED cable.
CD/DVD-ROM Drive	
NOTE: Ensure CD/DVD-ROM drive is configured correctly in BIOS Setup, cable/jumper are set correctly and its laser beam is clean before diagnosing any CD/DVD-ROM drive problems.	
CD/DVD-ROM drive LED doesn't come on but works normally.	1. CD/DVD-ROM drive
CD/DVD-ROM drive LED flashes for more than 30 seconds before LED shutting off. Software asks to reinstall disc. Software displays a reading CD/DVD error.	1. CD/DVD-ROM may have dirt or foreign material on it. Check with a known good disc. 2. CD/DVD-ROM is not inserted properly. 3. CD/DVD-ROM is damaged.
CD/DVD-ROM drive cannot load or eject when the system is turned on and its eject button is pressed and held.	1. Disconnect all cables from CD/DVD-ROM drive except power cable, then press eject button to try to unload the disk. 2. CD/DVD-ROM drive power. 3. CD/DVD-ROM drive
CD/DVD-ROM drive does not read and there are no messages are displayed.	1. CD may have dirt or foreign material on it. Check with a known good disc. 2. Ensure the CD/DVD-ROM driver is installed properly. 3. CD/DVD-ROM drive.

Error Symptom	Action/FRU
CD/DVD-ROM drive can play audio CD but no sound output.	1. Ensure the headphone jack of the CD/DVD-ROM has an output. 2. Turn up the sound volume. 3. Speaker power/connection/cable. 4. CD/DVD-ROM drive.
Real-Time Clock	
Real-time clock is inaccurate.	1. Ensure the information in the `Date and Time` of BIOS Setup is set correctly. 2. RTC battery. 3. System board
Audio	
Audio software program invokes but no sound comes from speakers.	1. Speaker power/connection/cable.
Modem	
Modem ring cannot wake up system from suspend mode.	1. Ensure the `Modem Ring Indicator` in BIOS Setup or `Power Management` is set to `Enabled`. 2. If PCI modem card is used, reinsert the modem card to PCI slot firmly or replace the modem card. 3. If ISA modem card is used, ensure the modem ring-in cable from the modem card to system board is connected properly. 4. In Win 98, ensure the telephone application is configured correctly for your modem and set to receive messages and/or fax.
Data/fax modem software program invokes but cannot receive/send data/fax	1. Ensure the modem card is installed properly.
Fax/voice modem software program invokes but has no sound output. (Data files are received normally; voice from modem cannot be produced, but system sound feature works normally.)	1. Ensure the modem voice-in cable from modem adapter card to system board
Video and Monitor	
Video memory test failed. Video adapter failed.	1. Remove all non-factory-installed cards. 2. Load default settings (if screen is readable). 3. System board
Display problem: - Incorrect colors No high intensity Missing, broken, or incorrect characters Blank monitor(dark) Blank monitor(bright) Distorted image Unreadable monitor Other monitor problems	1. Monitor signal connection/cable. 2. Monitor 3. Video adapter card 4. System board
Display changing colors.	1. Monitor signal connection/cable 2. Monitor 3. System board
Display problem not listed above (including blank or illegible monitor).	1. "Monitor". 2. Load default settings (if screen is readable). 3. System board

Error Symptom	Action/FRU
Parallel/Serial Ports	
Execute "Load BIOS Default Settings" in BIOS Setup to confirm ports presence before diagnosing any parallel/serial ports problems.	
Serial or parallel port loop-back test failed.	1. Make sure that the LPT# or COM# you test is the same as the setting in BIOS Setup. 2. Loop-back. 3. System board.
Printing failed.	1. Ensure the printer driver is properly installed. Refer to the printer service manual. 2. Printer. 3. Printer cable. 4. System board.
Printer problems.	1. Refer to the service manual for the printer.
Keyboard	
Some or all keys on keyboard do not work.	1. Keyboard
Power Supply	
Pressing power switch does not turn off system. (Only unplugging the power cord from electrical outlet can turn off the system.)	1. Ensure the `Power Switch < 4 sec.` in BIOS Setup of `Power Management` is not set to `Suspend`. 2. Power switch cable assembly
Pressing power switch does not turn on the system.	1. Ensure the power override switch (situated at the back of the machine, just above the connector for the power cable) is not set to OFF. 2. Power switch cable assembly.
Executing software shutdown from Windows98 Start menu does not turn off the system. (Only pressing power switch can turn off the system).	1. Load default settings. 2. Reload software from Recovery CD.
No system power, or power supply fan is not running.	1. Power Supply 2. System Board
Other Problems	
Any other problems.	1. Undetermined Problems

Error Beep Definition

Beep Code	Error Message	Description
2-1-2-2	DMA test failure	DMA internal register test fail
2-1-1-1	8742 KBC failure	KBC self test fail or not installed
2-1-2-1	Refresh failure	System DRAM refresh cycle out of spec.
2-1-1-2	Shutdown byte R/W failure	Shutdown byte in RTC/CMOS r/w test failure
2-2-2-1	Base 128K memory test failure	The first 128KB of base memory r/w test failure
2-2-1-2	Flash ROM BIOS failure	The BIOS code in flash ROM is corrupted

Beep Code	Warning Message	Description
2-1-1	VGA	Video buffer error
1-1	Com Port Boot	Console does not exist and message displayed to terminal

Beep Code	Warning Message	Description
2-2-1-1-1		No Memory or EDO DIMM
2-2		100 MHz DIMM SPD rev. before 1.1 or unavailable
2-2-2-1-1		Mix EDO DIMM w/ SPD and SDRAM DIMM w/ SPD
2-2-2-1-1-1		66MHz SDRAM DIMM in 100MHz system
2-2-2-1		Mix registered DIMM and unregistered DIMM

NOTE: "2" means long beep, "1" means short beep

Boot Block Update Function Error Beep Definition

If any error occurred during boot block update process, the system will issue specific error beeps and accompanied with an error code to port 80h to indicate the error type. Below is the error codes/error beeps list.

Error Description	Error code	Error Beeps
BIOS File Size Mismatch	F1h	1 long, 1 short beeps
BIOS File Reading Error	F2h	1 long, 1 short beeps
Model ID MIsmatch	F3h	3 short beeps
Flash Memory Erase Error	E1h	2 long, 1 short beeps
Flash Memory Programming Error (include failure on comparison)	E2h	2 long, 2 short beeps
Floppy Drive Not Installed	D1h	2 short beeps

The successful beep defined as **TWO long beeps**, **ONE short beep** then **ONE long beep** and success code is 00h.

Undetermined Problems

If an error message is present, go to "POST Error Messages List" on page 68 . If you did not receive any messages, see if the symptom is listed in "or "Error Symptoms List" on page 70. If you still cannot solve the problem, continue with this check:

1. Check the power supply voltages. If the voltages are correct continue with the following steps:

2. Power off the system unit.

3. Perform the following checks, one by one, until you have isolated the problem FRU.

4. Load default settings in setup.

5. Check all system board jumper positions and switch settings.

6. Check all adapter card jumper positions.

7. Check all device jumper positions.

8. Check all cables and connectors for proper installation.

9. If the jumpers, switches and voltage settings are correct, remove or disconnect the following, one at a time:

10. Non-Acer devices

   ❑   External devices

   ❑   Any adapter card (modem card, LAN card or video card, if installed)

   ❑   CD/DVD-ROM drive

   ❑   Diskette drive

   ❑   Hard disk drive

   ❑   DIMM

   ❑   Processor

   ❑   System board

11. Power on the system unit.

12. Repeat steps 2 through 5 until you find the failing device or adapter.

Jumper and Connector Information

AcerPower Sx/Sxb Jumpers and Connectors

Refer to the following figure for the location of the jumpers and connectors on the main board:
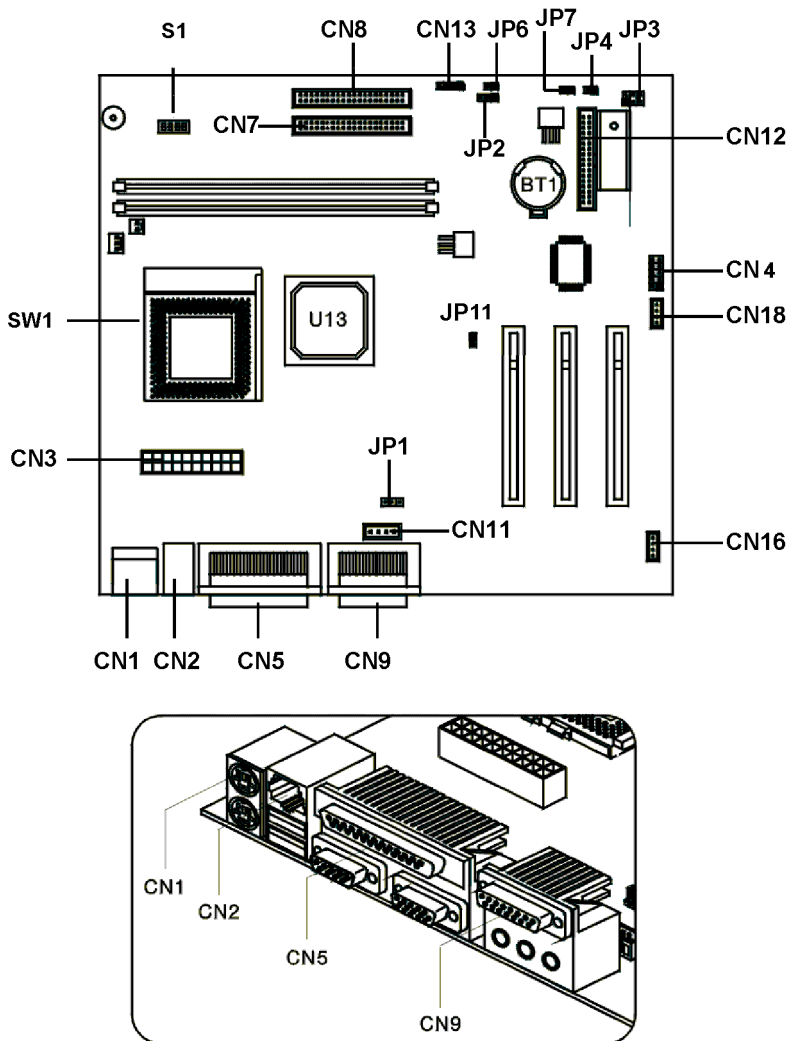
NOTE: SW1 and JP11 are only available in 99129-1M PCB.

NOTE: AcerPower Sx and AcerPower Sxb were using the same mainboard with different part number because the BIOS used by both models were also different.
AcerPower Sxb: 91.39J10.008, AcerPower Sx: 53.39J01.071.

Connector Description

Connector No.	Description
CN1	PS/2
CN2	USB/LAN
CN3	ATX power connector
CN4	COM port
CN5	Parallel/VGA/serial port 2
CN7	IDE2
CN8	IDE1
CN9	GAME/MIDI
CN11	Audio CD connector
CN12	Floppy Disk Drive
CN13	Hard Disk Drive LED
CN16	Fax voice modem
CN18	WAKE ON LAN
CN19	36-pin USB/AUDIO connector
CN20	RF connector
CN21	Slim CD-ROM connector
JP1	1/2: Disable on board codec 2/3: Enable on board codec
JP2	PWR LED
JP3	1/2, 4/5: 4M flash ROM 2/3, 5/6: 2M flash ROM
JP4	Reset
JP5	Intrusion
JP6	LAN LED
JP7	PWR switch
JP11	1/2: Clear CMOS 2/3: NOP, no operation
SW1	ON OFF* **NOTE:** Set this to ON when CPU is packaged by FCPGA, hence, it can avoid system resource waste.

NOTE: *: Default setting

Socket 370 core/bus clock ratio					
S1					
SW4	SW3	SW2	SW1	CPU	SDRAM
0	0	0	0	66	100
0	0	0	1	100	100
0	0	1	1	133	100
0	1	0	1	100	133
0	1	1	1	133	133
1	0	0	0	66	66

NOTE: There's only 66/100 MHz allowable speed limit for 66/133 MHz SDRAM.

AcerPower Sc Jumpers and Connectors

Refer to the following figure for the location of the jumpers and connectors on the main board:
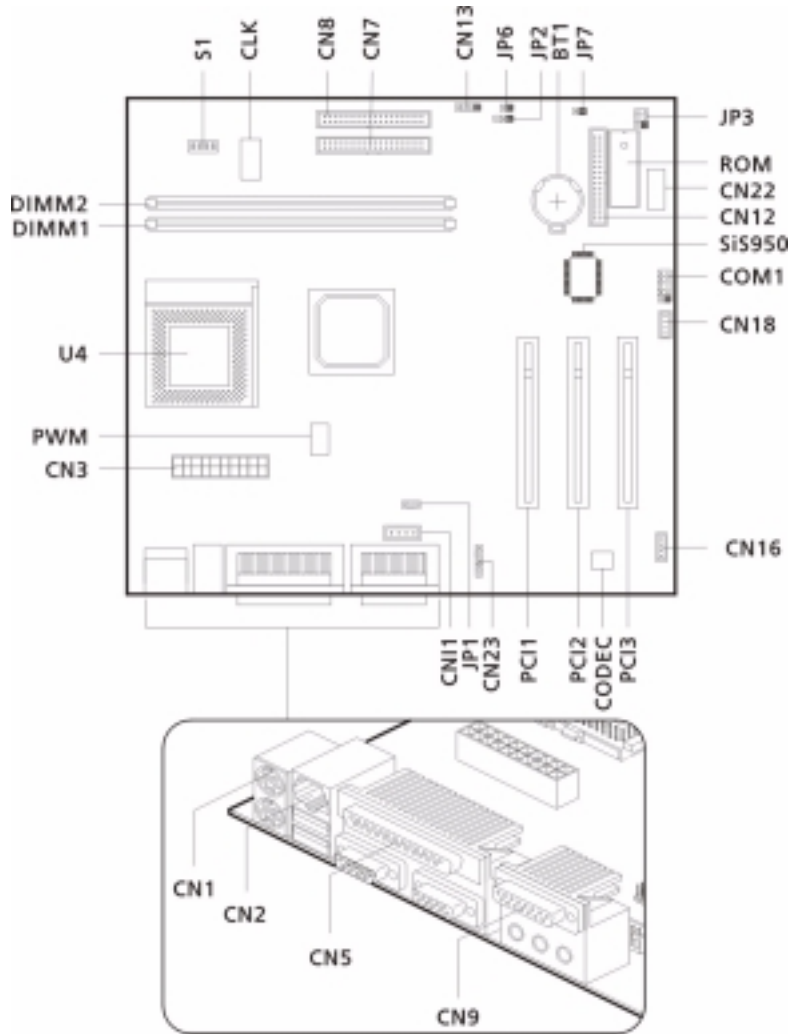
NOTE: PCB No. 99129-2.

Connector Description

Connector No.	Description
CN1	PS/2 connectors
CN2	USB/LAN connectors
CN3	ATX power connector
CN5	Printer/VGA/COM2 connectors
CN7	IDE2 connector
CN8	IDE1 connector
CN9	GAME/MIDI port
CN10	12-pin AC'97 connector
CN11	Audio CD connector
CN12	Floppy Disk Drive connector
CN13	Hard Disk Drive LED connector
CN16	Fax voice modem connector
CN18	Wake-on LAN connector
CN22	Optional USB ports
CN23	Audio-in connector
JP1	1-2: Disable on board codec 2-3: Enable on board codec
JP2	Power LED connector
JP3	1-2 and 4-5: 4M flash ROM 2-3 and 5-6: 2M flash ROM
JP6	LAN LED connector
JP7	Power switch connector
SW1	ON OFF* **NOTE:** Set this to ON when CPU is packaged by FCPGA, hence, it can avoid system resource waste.

NOTE: *: Default setting

Socket 370 core/bus clock ratio					
S1					
SW4	SW3	SW2	SW1	CPU	SDRAM
0	0	0	0	66	100
0	0	0	1	100	100
0	0	1	1	133	100
0	1	0	1	100	133
0	1	1	1	133	133

FRU (Field Replaceable Unit) List

This chapter gives you the FRU (Field Replaceable Unit) listing in global configurations of AcerPower Sx. Refer to this chapter whenever ordering for parts to repair or for RMA (Return Merchandise Authorization).

NOTE: Please note WHEN ORDERING FRU PARTS, that you should check the most up-to-date information available on your regional web or channel. For whatever reasons a part number change is made, it will not be noted in the printed Service Guide. For ACER-AUTHORIZED SERVICE PROVIDERS, your Acer office may have a DIFFERENT part number code to those given in the FRU list of this printed Service Guide. You MUST use the local FRU list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

NOTE: To scrap or to return the defective parts, you should follow the local government ordinance or regulations on how best to dispose it, or follow the rules set by your regional Acer office on how to return it.
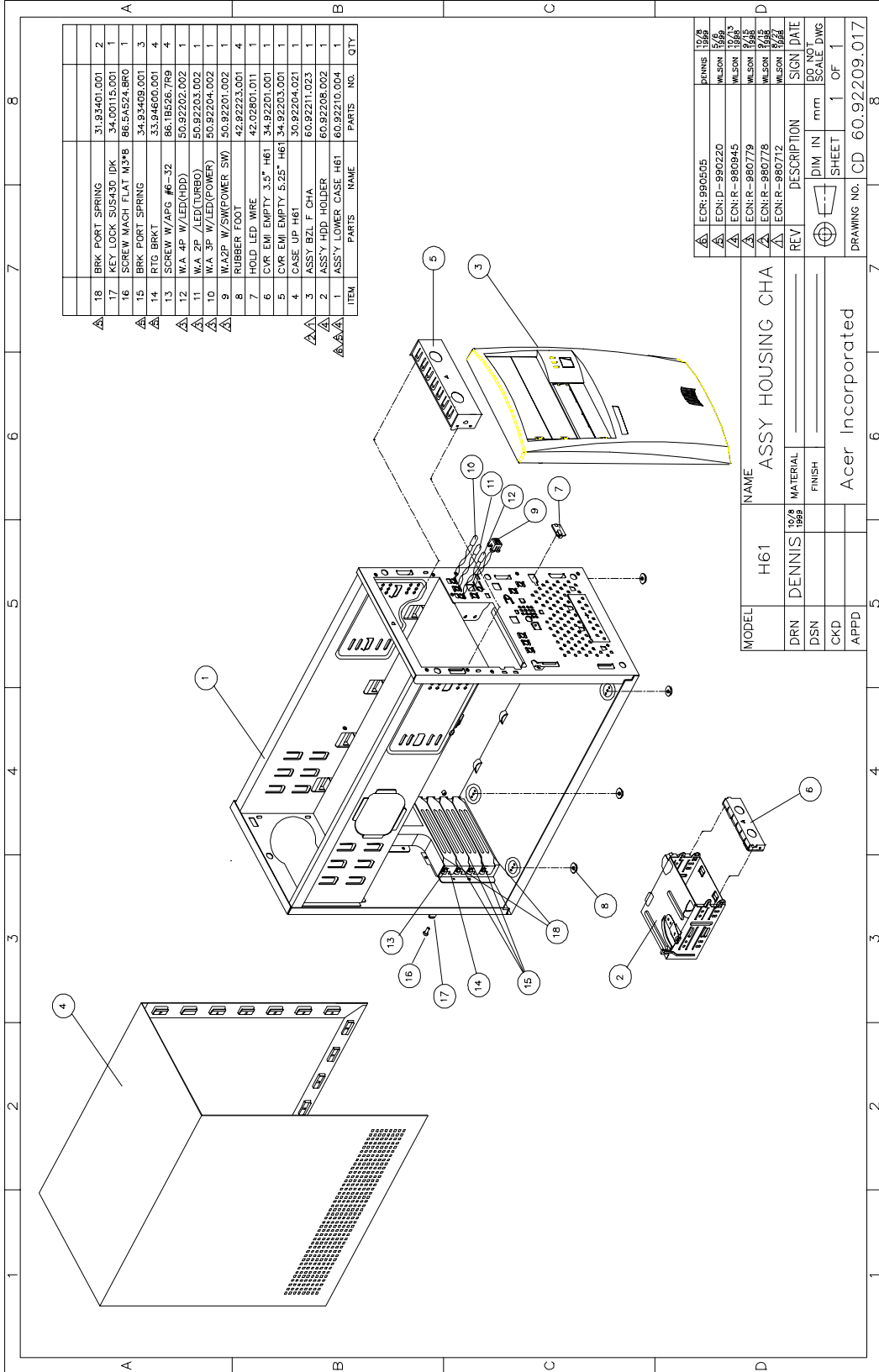
ITEM	PARTS NAME	PARTS NO.	QTY
18	BRK PORT SPRING	31.93401.001	2
17	KEY LOCK SUS430 IDK	34.00115.001	1
16	SCREW MACH FLAT M3*8	86.5A524.BR0	1
15	BRK PORT SPRING	34.93409.001	3
14	RTG BRKT	33.94600.001	4
13	SCREW W/APG #6-32	86.1B526.7R9	4
12	W.A 4P W/LED(HDD)	50.92202.002	1
11	W.A 2P /LED(TURBO)	50.92203.002	1
10	W.A 3P W/LED(POWER)	50.92204.002	1
9	W.A2P W/SW(POWER SW)	50.92201.002	1
8	RUBBER FOOT	42.92223.001	4
7	HOLD LED WIRE	42.02801.011	1
6	CVR EMI EMPTY 3.5" H61	34.92201.001	1
5	CVR EMI EMPTY 5.25" H61	34.92203.001	1
4	CASE UP H61	30.92204.021	1
3	ASS'Y BZL F CHA	60.92211.023	1
2	ASS'Y HDD HOLDER	60.92208.002	1
1	ASS'Y LOWER CASE H61	60.92210.004	1

REV	DESCRIPTION	SIGN	DATE
	ECR:990505	DENNIS	10/8 1999
	ECN:D-990220	WILSON	5/6 1999
	ECN:R-980945	WILSON	10/13 1998
	ECN:R-980779	WILSON	9/15 1998
	ECN:R-980778	WILSON	9/15 1998
	ECN:R-980712	WILSON	8/27 1998

DRAWING NO. CD 60.92209.017

SHEET 1 OF 1

DIM IN mm

DO NOT SCALE DWG

NAME ASSY HOUSING CHA

Acer Incorporated

MODEL H61

DRN DENNIS 10/8 1999

DSN

CKD

APPD

MATERIAL

FINISH

Picture	No.	Partname	Description	Part No.
CPU/Processor				
	NS	CPU, 500MHz, Socket 370, Celeron, Intel	Celeron 500MHz, 128k OD	01.ICLON.500
	NS	CPU, 533MHz, Socket 370, Celeron, Intel	Celeron 533MHz, 128k OD	01.ICLON.533
	NS	CPU, 733MHz, 133MHz FSB, Coppermine, Intel	Coppermine 733MHz, 133MHz FSB, 256K	01.COPRM.73A
	NS	CPU, 667MHz, Socket 370, 133MHz FSB, Coppermine, Intel	Coppermine 667MHz, 133MHz FSB, 256K	01.COPRM.66A
	NS	CPU, 600EBMHz, 133MHz FSB, Coppermine, Intel	Coppermine 600EBMHz, 133MHz FSB, 256K	01.COPRM.60E
	NS	CPU, 533EBMHz, 133MHz FSB, Socket 370, Coppermine, Intel	Coppermine 533EBMHz, 133MHz FSB, 256K	01.COPRM.53A
	NS	CPU, 750MHz, 100MHz FSB, Coppermine, Intel	Coppermine 750MHz, 100MHz FSB, 256K	01.COPRM.75A
	NS	CPU, 700MHz, 100MHz FSB, Socket 370, Coppermine, Intel	Coppermine 700MHz, 100MHz FSB, 256K	01.COPRM.70B
	NS	CPU, 650MHz, 100MHz FSB, Socket 370, Coppermine, Intel	Coppermine 650MHz, 100MHz FSB, 256K	01.COPRM.65B
	NS	CPU, 600EMHz, 100MHz FSB, Socket 370, Coppermine, Intel	Coppermine 600EMHz, 100MHz FSB, 256K	01.COPRM.60D
	NS	CPU, 550MHz, 100MHz FSB, Socket 370, Coppermine, Intel	Coppermine 550MHz, 100MHz FSB, 256K	01.COPRM.550
	NS	CPU, 500EMHz, 100MHz FSB, Coppermine, Intel	Coppemine 500EMHz, 100MHz FSB, 256K	01.COPRM.50B
	NS	CPU fan module, 2 pins	2 pin fansink for Socket 370	90.00028.641

Picture	No.	Partname	Description	Part No.
Memory				
	NS	SDIMM, 32MB, PC-100, Micro	SDIMM 32M MT4LSDT464AG-10EC5 / Micro	72.04464.L04
	NS	SDIMM, 64MB, PC-100, Micro	SDIMM 64M MT8LSDT864AG-10EC7/ Micro	72.08864.L04
	NS	DIMM, 128MB, PC-100, Micro	SDIMM 128M MT16LSDT1664AG-10EC / Micro	72.16164.L03
	NS	DIMM, 64MB, PC-133, Micro	DIMM 64M MT8LSDT864AG133C7/ Micro	72.08864.L05
	NS	DIMM, 128MB, PC-133, Micro	DIMM 128M MT16LSDT1664AG-133C7/ Micro	72.16664.L04
	NS	DIMM, 32MB, PC-100, Siemens	SDRAM 32M HYS64V4300GU-8(B)/ Siemens	72.64430.L01
	NS	DIMM, 64MB, PC-100, Siemens	SDRAM 64M HYS64V8300GU-8(B)/ Siemens	72.64830.L01
	NS	DIMM, 128MB, PC-100, Siemens	SDIMM 128M HYS64V16220GU-8(B)/ Siemens	72.64162.L02
	NS	DIMM, 64MB (8M*8), PC-133, Siemens	DIMM 64MB HYS64V8300GU-7.5(B) / Siemens	72.64830.L02
	NS	DIMM, 128MB (8M*8), PC-133, Siemens	DIMM 128MB HYS64V16220GU-7.5(B) / Siemens	72.64162.L03
Monitor				
	NS	Monitor, 15" , for AAC/ ACLA,110V	1555-121 / API/Comel	91.71602.301
	NS	Monitor, 15", for ACI/AEB/ ACLA, 110V/220V	1555-410 / API/Comel	91.71602.302
	NS	Monitor, 15", for ACI/ACLA, 110V/220V	1555-610 / API/Comel	91.71602.303
	NS	Monitor, 15", for ACI, 110V/ 220V	1555-510 / API/Comel	91.71602.304
	NS	Monitor, 15", for STK,110V	1555-431/ API/Comel	91.71602.305
	NS	Monitor, 17", for Acer View 77C	MPRII 77c / API/Comel	91.70602.107
	NS	Monitor, 17", for AAC/ACLA	JD177H7M(0117708002)/ J71C / Jean	90.38A02.001
	NS	Monitor, 17" , for ACI/ACG	JD177H7M(0117708003)/ J71C / Jean	90.38A02.002
	NS	Monitor,17", for ACI/ACLA	JD177H7M(0117708004)/ J71C / Jean	90.38A02.003
	NS	Monitor,17", for ACI(Aus/Nez)	JD177H7M(0117708005)/ J71C / Jean	90.38A02.004
	NS	Monitor, 17" , for STK/Taiwan	JD177H7M(0117708006)/ J71C /Jean	90.38A02.005

Picture	No.	Partname	Description	Part No.
	NS	Monitor, 17" , for AMS	JD177H7M(0117708008)/ J71C /Jean	90.38A02.007
	NS	Monitor, 17" , for AWE/ACG	JD177H7T(0117708007)/ J71C /Jean	90.38A02.006
FDD/Floppy Disk Drive				
	NS	FDD, Panasonic	FDD 1.44 JU-256A046P ACER V.S	56.01057.194
HDD/Hard Disk Drive				
	NS	3.5", U8 4.3GB(U8 Series), Seagate	HDD 4.3GB Seagate/ ST34313A	56.02831.221
	NS	3.5", U8 8.6GB(U8 Series), Seagate	HDD 8.6GB Seagate/ ST38410A	56.02A32.051
	NS	3.5",U8 13.0GB(U8 Series), Seagate	HDD 13GB Seagate/ ST313021A	56.02A82.031
	NS	3.5", U8 17.2GB(U8 Series), Seagate	HDD 17.2GB Seagate/ ST317221A	56.02B34.031
	NS	3.5", LCT 8.4GB(LCT8/EJ Series), Quantum	HDD 8.4GB Quantum/8.4AT LA08A	56.02A31.061
	NS	3.5", LCT 13.0GB(LCT8/EJ Series), Quantum	HDD 13GB Quantum/13AT LA13A	56.02A84.041
	NS	3.5", 10GB(Titan Series), Maxtor	HDD 10GB Maxtor/91021U2	56.02A72.071
	NS	3.5", 15GB(Titan Series), Maxtor	HDD 15GB Maxtor/91531U3	56.02B61.011
	NS	3.5", 20GB(Titan Series), Maxtor	HDD 20GB Maxtor/ 2041U4	56.02B34.041
CD-ROM drive				
	NS	CD-ROM, 40X, API	CD-ROM 40X API/640A-247 (Acer color)	56.10212.021
	NS	CD-ROM, 40X, AO (Flash ROM)	CD-ROM 40X AO/ CD-940E Pro Rev.1.00	91.24D37.407
	NS	CD-ROM, 40X, AO, EPROM	CD-ROM 40X AO/CD-940E Pro (EPROM)	91.24D37.406
DVD-ROM drive				
	NS	DVD-ROM, 6X/24X, Hitachi	DVD 6/24X HIT/GD2500BX	56.22000.011
	NS	DVD-ROM, 6X/32X, Hitachi	DVD 6X/32X HITACHI/GD-3000	56.2238A.021
	NS	DVD-ROM, 8X/40X, Hitachi	DVD ROM 8/40 HIT/ GD5000BVIB	56.2232G.001
Cables				
	NS	IDE Cable(w/i 3CONN) 350 HDD	C.A. 40P 3C 100+250MM ATA66 H61	50.92207.011

Picture	No.	Partname	Description	Part No.
	NS	FDD cable(w/l 2 conn)	C.A 34P 2C 280MM FDD H61	50.92205.011
	NS	IDE Cable(w/l 3 CONN) 450 HDD	C.A 40P 3C 150+300MM IDE H61	50.92207.031
	NS	IDE Cable(w/l 2 CONN) CDROM	C.A 40P 2C 350MM IDE H61	50.92206.011
	NS	Audio Cable	W.A 4P 2C Audio 520MM H61	50.37702.041
	NS	Audio Y Cable	C.A 44P 2C 150MM MB/IF V66LT	50.33702.051
Main board				
	NS	Mainboard S57M	MAIN BD S57M	55.39J01.01A
Boards				
	NS	Modem board, WS-5614PMMU	MODEM 33.6(B)GVCSF1136HV+11R 16	54.09242.241
	NS	Modem board, 1456VQH20E	MODEM D/F 56K ASKEY/ 1456VQH20E	54.09551.051
	NS	Modem board, T62M154.00	MODEM 56K D/F AMBIT/ MRT62M154	54.09011.281
	NS	Modem board, ANI-RA05P	MODEM S/W 90 56 NETX/ AMI-RA05P	54.09301.001

NOTE: Models with Part No. 55.39J01.M03 can support 10/100M LAN (Embedded in SiS630 chipset), while some models with Part No. 55.39J01.M06 will not support LAN even though chipsets are still present on the mainboard.

Picture	No.	Partname	Description	Part No.
	NS	Lan board, 10/100MB, lan card, Netxus	LAN ANI/ALN-325/B50 PCI 10/100	54.03111.001
	NS	Lan board, 10/100MB, Lan card, 3Com	3C905C-TX 10/100Mb Fast EtherLink XLWOL	54.03091.031
	NS	Lan board, 10/100MB, Lan card, Acer	NIC-559A LAN CARD W/O LOOKOUT	91.82610.103
	NS	Lan board, 10/100 MB, Lan card, Acer	NIC-559A LAN CARD W/O BOOTROM	91.82610.104
Power Supply				
	NS	Power Supply, 145W(+5Vsb/3A), API	SPS 145W API/API-9502-071	56.04145.551
	NS	Power Supply, 145W,(+5Vsb/3A), Delta	SPS 145W DELTA/DPS-145PB-82A	56.04145.1Q1
	NS	Power Supply, 145W, (+5Vsb/3A), High Power	SPS 145W HI-PWR/SI-X145M3 V.B1	56.04145.4U1
Case/Cover/Bracket Assembly				
	NS	Lower Case H61	ASSY L CASE H61	60.92210.003
	4	Upper Case H61	CASE UP SECC 002 H61	30.92204.021
	5	HDD EMI bracket	CVR EMI EMPTY 5.25"(TOOL) H61	34.92203.001
	6	CD-ROM EMI bracket	CVR HDD EMI (TOOLING) SUS H61	34.92201.001

Picture	No.	Partname	Description	Part No.
	3	Front Panel CHA	ASSY BZL F CHA H61	60.92211.023
	NS	CD-ROM drive empty cover 002	CVR EMPTY 525 CHA HIPS 002 61	42.92221.011
	NS	FDD drive empty cover 002	CVR EMPTY 35 CHA HIPS 002 H61	42.92222.011
	2	Drive Holder	ASSY HDD HOLDER H61	60.92208.002
	NS	I/O Port Bracket	ASSY PORT BRKT B2UL FGA H61	60.92206.111
	14	Add-On board port BRKT	BKT PORT SECC H51	33.94600.001
Screws				
	13	Add on board port BRKT, SPS, Case, M/B screws	SCRW MACH PAN W/ SPG#6-32*5/16	86.1B526.7R9
	16	Back case screws	SCRW MACH FLAT M3*0.5P*8L NI	86.5A524.8R0
	NS	HDD screws	SCRW MACH BDG #6-32*3/ 16" NI	86.4A5A6.012
	NS	FDD, CDR,DVD screws	SCRW PAN W/FLT SPG M3*6L NI	86.1H524.6R0
	NS	HEX screws	SCREW HEX I#4-40/O#4-40 L5.5 NI	34.00015.071
Miscellaneous				
	8	Foot stand	FOOT RUBBER SILICON H61	42.92223.001

Picture	No.	Partname	Description	Part No.
	NS	Power switch knob CHA	KNOB PWR CHA HIPS 002 H61	42.92219.011
	NS	Power switch knob spring	SPRING POWER KNOB SUS IDCMT/FU	34.02708.001
	17	Key lock	KEY LOCK SUS430 IDK	34.00115.001
	15	RTG Bracket port spring	SPRING PLT (A) PBSPS T-.15 H40	34.93409.001
	7	LED cable catch	HOLDER WIRI NYLON66 IDC-DT	42.02801.011
	NS	plate name for I/O port	PLT NAME IO PORT for H61	40.92201.341
	NS	Mainboard Rubber Foot	Rubber Foot T-6.8 IDB3	47.91012.001
	18	Bracket port spring	PLT SLOT (B) CU H40	31. 93401.001
	NS	Switch/LED cable kit	ASSY SWITCH/LED CABLE PACK H61	6K.92201.001
Keyboard				
	NS	Keyboard, 104 key US, 52VL API	KB 104 Key US/ 6511-V41/L	99.P0481.L41
	NS	Keyboard, US 104 key, 62C API	KB US 104 KEY API 6511-CX(62C)	91.62C07.041

Picture	No.	Partname	Description	Part No.
Pointing Device				
	NS	Mouse, 2-button	MOUSE LOGITECH 2 BUTTON/S42	90.00026.915
	NS	Mouse, wheel	MOUSE WHEEL LOGITECH/ S48A S61	90.35G26.001
	NS	Mouse, 2-button MUSXJ	MOUSE 2 BUTTON PRIMAX/MUSXJ	90.00026.067
	NS	Mouse, wheel	MOUSE WHEEL PRIMAX/ MOSXK D002	90.00026.070
Speaker				
	NS	Speaker, USB, Midiland	SPK USB PWR MIDILAND/ A-1 V66M	90.38A12.003

Model Definition and Configuration

The AcerPower Sx Model No. Define:

1. Trade Mark:

2. Brand Name: Acer
3. Description: SiS 630 chipset based PC system
4. Model No: AP Sx (Acer Power Sx) (S57M/H61)
5. Product Name: Acer Power Sx

The AcerPower Sc Model No. Define:

1. Trade Mark:

2. Brand Name: Acer
3. Description: SiS 630ET chipset based PC system
4. Model No: AP Sc (S57M-2/H61)
5. Product Name: Acer Power Sc

Test Compatible Components

This computer's compatibility is tested and verified by Acer's internal testing department. All of its system functions are tested under MS DOS V6.22, Windows 98 SE, Windows 2000, Windows NT 4.0, IBM OS/2 4.0, Netware 3.12 / 4.11 / 5.0, and UNIX/Linux environment.

Refer to the following lists for components, adapter cards, and peripherals which have passed these tests. Regarding configuration, combination and test procedures, please refer to the AcerPower Sx Compatibility Test Report released by the Acer Desktop System Testing Department.

Microsoft DOS V6.22 Environment Test

Item	Specifications
Processor	Celeron 500 MHz Celeron 533 MHz Coppermine 650 MHz Coppermine 667 MHz
Memory	32 MB 64 MB 96 MB 128 MB
Cache	128 KB 256 KB
Floppy Disk Drive	Mitsumi Panasonic
EIDE Channel 1 Master	8.6 GB 13.0 GB 17.2 GB 20 GB
EIDE Channel 1 Slave	4.3 GB 8.4 GB 8.6 GB 15 GB
EIDE Channel 2 Master	API 40X CD-ROM 640A-247 AO 40X CD-ROM CD-940E Hitachi 6x/32x GD3000 BV Hitachi 8x/40x GD5000 BVAC
EIDE Channel 2 Slave	Hitachi 6X DVD
Mouse	Logitech S42 (2 button) Logitech S48 (wheel) Primax MUSXJ (2 button) Primax (wheel)
Monitor	API 1555 API MPRII 77C Jean JD177H7M API 1555
Keyboard	API 52VL 6511-V41/L API 62C 6511-CX41 API 52VL 6511-V41/L API 62C 6511-CX41

Microsoft Windows 98 SE (En/TC/SC) Environment Test

Item	Specifications
Processor	Celeron 500 MHz
	Celeron 533 MHz
	Coppermine 650 MHz
	Coppermine 667 MHz
Memory	32 MB
	64 MB
	96 MB
	128 MB
Cache	128 KB
	256 KB
Floppy Disk Drive	Mitsumi
	Panasonic
EIDE Channel 1 Master	8.6 GB
	13.0 GB
	17.2 GB
	20 GB
EIDE Channel 1 Slave	4.3 GB
	8.4 GB
	8.6 GB
	15 GB
EIDE Channel 2 Master	API 40X CD-ROM 640A-247
	AO 40X CD-ROM CD-940E
	Hitachi 6x/32x GD3000 BV
	Hitachi 8x/40x GD5000 BVAC
EIDE Channel 2 Slave	Hitachi 6X DVD
VGA Card	ATI Xpert play 98 3D Rage Pro
	Diamond Viper V330 (RIVA 128)
Mouse	Logitech S42 (2 button)
	Logitech S48 (wheel)
	Primax MUSXJ (2 button)
	Primax (wheel)
Monitor	API 1555
	Jean JD177H7M
	API 1555
Keyboard	API 52VL 6511-V41/L
	API 62C 6511-CX41
	API 52VL 6511-V41/L
	API 62C 6511-CX41
Joystick/GamePad	SideWinder Precision Pro
	Microsoft SideWinder Force Feedback Pro
	MS SideWinder 3D PRO
	SideWinder Force Feedback Pro
USB	HP DeskJet 895C USB Printer
	Logitech Pagescan USB
	API 310U
	Intel USB Digital Camera
	Primax USB Joystick Raptor 3D
	Primax USB Joystick

Item	Specifications
Adapters	
Display Adapter	ATI 3D Rage Pro PCI
	Diamond Viper V330 (RIVA 128)
Sound/MPEG Adapter	SiS630 & Crystal 4297 (onboard)
Fax/Modem Adapter	Askey Conexant for US 1456VQH75A
	Askey Conexant for EMEA 1456VQH75A
	Acer Netxus Conexant for US AMI-RA06P-D
	Askey Pc-tel for US V1456VQH20B
	Askey Pc-tel for EMEA V1456VQH20B

Microsoft Windows 2000 Environment Test

Item	Specifications
Processor	Celeron 533 MHz Coppermine 667 MHz
Memory	128 MB 256 MB
Cache	128 KB 256 KB
Floppy Disk Drive	Mitsumi D353M3 Panasonic
EIDE Channel 1 Master	17.2 GB (U8 Series) 20 GB (Titan)
EIDE Channel 1 Slave	4.3 GB (U8 Series) 8.4 GB (LCT8/EJ Series)
EIDE Channel 2 Master	API 40X CD-ROM AO 40X CD-ROM
Mouse	Logitech S42 Primax MUSXJ
Monitor	API 1555 Jean JD177h7m
Keyboard	API 52VL API 62C

Microsoft Windows NT 4.0 Environment Test

Item	Specifications
Processor	Celeron 533 MHz Coppermine 667 MHz
Memory	128 MB 256 MB
Cache	128 KB 256 KB
Floppy Disk Drive	Mitsumi D353M3 Panasonic
EIDE Channel 1 Master	17.2 GB (U8 Series) 20 GB (Titan)
EIDE Channel 1 Slave	4.3 GB (U8 Series) 8.4 GB (LCT8/EJ Series)
EIDE Channel 2 Master	API 40X CD-ROM AO 40X CD-ROM
Mouse	Logitech S42 Primax MUSXJ
Monitor	API 1555 Jean JD177h7m
Keyboard	API 52VL API 62C
Fax/Modem Card	Askey Conexant Acer Netxus AMI-RA06P-D Askey Pc-tel Acer Netxus AMI-RA06P-D
Adapters	
Sound Adapter	SiS630/Crystal CS4297A (onboard)
Display Adapter	On-chip SiS630

IBM OS/2 Warp 4.0 Environment Test

Item	Specifications
Processor	Coppermine 600EB MHz
Memory	256 MB
Cache	256 KB
Floppy Disk Drive	Panasonic 3mode
EIDE Channel 1 Master	Seagate 20 GB Titan Series
EIDE Channel 2 Slave	Aopen 40X CD-ROM
Mouse	Acer (Primax) 2 button PS/2
Monitor	API 1555
Keyboard	API 6511-V41/L

Novell Netware 3.12, 4.11 & 5.0 Environment Test

Item	Specifications
Processor	Celeron 500 MHz
	Celeron 533 MHz
	Coppermine 650 MHz
	Coppermine 677 MHz
Memory	64 MB
	96 MB
	128 MB
	256 MB
Cache	128 KB
	256 KB
Floppy Disk Drive	Mitsumi
	Panasonic
EIDE Channel 1 Master	4.3 GB
	8.4 GB
	10 GB
	13 GB
EIDE Channel 2 Master	AO CD-940E
	API 640A-247
	Hitachi GD5000
	AO 40X
Monitor	API 1555
	AcerView 77C
	Jean JD177H7M
Keyboard	API 52P
Adapter	
SCSI Adapter	AHA-2940UW

SCO UNIX/Linux Environment Test

Item	Specifications
Processor	Celeron 533 MHz Coppermine 667 MHz
Memory	128 MB
Cache	128 KB 256 KB
Floppy Disk Drive	Mitsumi D353M3 Panasonic 3mode
EIDE Channel 1 Master	13 GB 20 GB
EIDE Channel 2 Master	AO CD-940E API 640A-247
Mouse	Logitech S42 Primax MUSXJ (002)
Monitor	Acer 1555 AcerView 1777
Keyboard	API 52VL API 62C

NOTE: There's no certification available because SiS630 chipset can't support RedHat Linux.

Online Support Information

This section describes online technical support services available to help you repair your Acer Systems.

If you are a distributor, dealer, ASP or TPM, please refer your technical queries to your local Acer branch office. Acer Branch Offices and Regional Business Units may access our website. However some information sources will require a user i.d. and password. These can be obtained directly from Acer CSD Taiwan.

Acer's Website offers you convenient and valuable support resources whenever you need them.

In the Technical Information section you can download information on all of Acer's Notebook, Desktop and Server models including:

- ❑ Service guides
- ❑ User's manuals
- ❑ Training materials
- ❑ Main manuals
- ❑ Bios updates
- ❑ Software utilities
- ❑ Spare parts lists
- ❑ Chips
- ❑ TABs (Technical Announcement Bulletin)

For these purposes, we have included an Acrobat File to facilitate the problem-free downloading of our technical material.

Also contained on this website are:

- ❑ Detailed information on Acer's International Traveler's Warranty (ITW)
- ❑ Returned material authorization procedures
- ❑ An overview of all the support services we offer, accompanied by a list of telephone, fax and email contacts for all your technical queries.

We are always looking for ways to optimize and improve our services, so if you have any suggestions or comments, please do not hesitate to communicate these to us.

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